HELICOPTERS IN IRREGULAR WARFARE: ALGERIA, VIETNAM, AND AFGHANISTAN

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The preponderance of conflicts fought over the last seventy years have included or been centered on irregular warfare and counter-insurgency. Indeed, the helicopter's first significant trials in combat took place during the Algerian War 1954-1962, the Vietnam War 1955-1975, and the Soviet-Afghan War 1979-1989. During these wars, the French, U.S., and Soviet militaries used significant numbers of helicopters to fight insurgents and guerrillas, and each country lost their respective conflict. As conventional organizations, these militaries used helicopters to seek military dominance, often blind to or in spite of politico-strategic goals like legitimacy. The helicopter's firepower and mobility tactically decimated insurgents, but the nature of irregular warfare rendered tactical dominance indecisive. Helicopters were indecisive or bad at enabling legitimacy, population control, and isolation, key tenets of successful COIN. Convinced that helicopter enabled military dominance could win, the French, U.S., and Soviet militaries were unable to balance the pursuit of military and politically objectives. Airmobility distracted leaders from focusing on the political aspects of counter-insurgency.

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ABSTRACT

HELICOPTERS IN IRREGULAR WARFARE: ALGERIA, VIETNAM, AND AFGHANISTAN, by Beau G. Rollie, 159 pages.

The preponderance of conflicts fought over the last seventy years have included or been centered on irregular warfare and counter-insurgency. Indeed, the helicopter's first significant trials in combat took place during the Algerian War 1954-1962, the Vietnam War 1955-1975, and the Soviet-Afghan War 1979-1989. During these wars, French, U.S., and Soviet militaries used significant numbers of helicopters to fight insurgents and guerrillas, and each country lost their respective conflict. As conventional organizations, these militaries used helicopters to seek military dominance, often blind to or in spite of politico-strategic goals like legitimacy. The helicopter’s firepower and mobility tactically decimated insurgents, but the nature of irregular warfare rendered tactical dominance indecisive. Helicopters were indecisive or bad at enabling legitimacy, population control, and isolation, key tenets of successful COIN. Convinced that helicopter enabled military dominance could win, the French, U.S., and Soviet militaries were unable to balance the pursuit of military and politically objectives. Airmobility distracted leaders from focusing on the political aspects of counter-insurgency.

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TABLE OF CONTENTS

Page

ACRONYMS

AAC	Advanced air commands. French Aviation C2, similar to a U.S. battalion or squadron
ALN	*Armée de Libération Nationale*, the military arm of FLN
ARVN	Army of the Republic of Vietnam
C2	Command and control
CAS	Close Air Support
COIN	Counter-insurgency
DIH	*Détachments d'Intervention Hélicoptèr*. French army aviation unit equivalent to a U.S. aviation company
DRA	Democratic Republic of Afghanistan
FLN	*Fronte de Libération Nationale*, the political group associated with the Algerian nationalist independence movement
GALAT	*Groupement d' Aviation Légère de l'Armée de Terre*. Scalable French army aviation unit equivalent to a U.S. aviation brigade
GATAC	*Groupment Aèrien Tactique.* French Air Force unit, equivalent to an U.S. air wing
LCOSF	Limited Contingent of Soviet Forces
LZ	Landing zone
PAVN	Peoples Army of Vietnam
PDPA	People's Democratic Party of Afghanistan
RF/PF	Regional Forces and Popular Forces
TTP	Tactics, Techniques, and Procedures
VC	Viet Cong
VVS	*Voenno-Vozdushnye Sily* or Soviet Air Forces

CHAPTER 1

INTRODUCTION

> Hannibal had elephants and therefore he had an elephant strategy even in the Alps.[1]
>
> — Brian M. Jenkins

In order to analyze the helicopter's use in irregular warfare it is useful to look at past conflicts to gain perspective. The French in Algeria, the United States (U.S.) in Vietnam, and the Soviets in Afghanistan are the most relevant case studies with respect to rotary wing employment against irregular forces in the 20th century, due to the relative length of these conflicts and the number of helicopters committed. The organization, equipping, and training of conventional airmobile forces represented large expenditures by the countries involved, and this thesis seeks to evaluate the overall effectiveness of helicopters and airmobility in expeditionary counter-insurgency (COIN) and irregular warfare.

Organization and equipment drive tactics, and in the presence of ill-defined or unattainable strategic goals, tactics tend to drive operations and strategy.[2] France, America, and the Soviet Union joined their respective conflicts with large conventional forces that prized firepower and mobility. To make use of the helicopter's firepower and mobility, each country quickly committed large helicopter-supported airmobile forces that served as central elements to their respective counter-insurgent strategies. As each

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[1]Brian M. Jenkins, *The Unchangeable War* (Santa Monica CA: Rand Corporation, 1970), 6, http://www.dtic.mil (accessed 10 May 2013).

[2]Ibid., 5.

conflict progressed, rotary wing aircraft became more crucial to operations because of the tactical success they enabled. Thus the presence of helicopters began to drive operations and by default, strategy. In each war, governmental legitimacy was a stated strategic goal, yet the preponderance of operations focused on military objectives that contributed little to legitimacy.[3] Doctrine and organization pre-programmed conventionally organized helicopter-equipped armies to seek decisive military victory, often at the expense of their political goals.

From 1958 to 1959, General Maurice Challe used French helicopters and mobile reserves in the difficult terrain of Algeria to deal a series of significant military defeats to the ALN.[4] From 1964 to 1968, General William C. Westmoreland applied helicopters in the jungles of Vietnam where they achieved a series of lopsided tactical victories designed to attrite VC and PAVN forces.[5] From 1986 to 1987, General-Major Viktor P. Dubynin used Limited Contingent of Soviet Forces (LCOSF) airmobile units in a series of successful assaults that enabled temporarily relief of the beleaguered garrison at Khost, Afghanistan.[6] Generals Challe, Westmoreland, and Dubynin each committed their airmobile forces in large military operations designed to achieve decisive victory. In each case, the outcome signified only temporary tactical success, because the land taken was

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[3]Roger Trinquier, *Modern Warfare: A French View of Counterinsurgency* (New York: Praeger, Inc., 1964), 1-9; Jenkins, *The Unchangeable War*, 4-5.

[4]Francois-Marie Gougeon, "The Challe Plan: Vain but Indispensable Victory," *Small Wars and Insurgencies* 16, no. 3 (December 2005): 310.

[5]William C. Westmoreland, *A Soldier Reports* (New York: De Cappo Press, 180), 146.

[6]Russian General Staff, *The Soviet Afghan War: How a Superpower Fought and Lost,* trans. and ed. Lester W. Grau and Michael A. Gress (Lawrence, KS: University of Kansas Press, 2002), 27-28

not held. Conversely, each success was indecisive at the operational and strategic levels because military victory did nothing to challenge enemy political control of the respective populations.[7]

The French, American, and Soviet armies focused their airmobile efforts towards the pursuit of decisive military victory, often in lieu of effective political strategy. This approach created a strategy of tactics, where helicopter enabled tactical success tilted the operational and strategic approaches away from political objectives. Instead of pursuing nebulous political goals like legitimacy, the conventional armies of France, America, and the Soviet Union sought comfort in military objectives like attrition and destruction of enemy forces. By most accounts, the helicopters employed enabled tactical dominance, and by allowing domination, airmobility distracted leaders from focusing on the political aspects of expeditionary COIN. Tactical dominance also enabled the perception that decisive military victory was possible against irregular enemies in limited war. This perception proved faulty in all three conflicts due to the nature of irregular war and expeditionary COIN. To understand the conclusions of this thesis, working definitions for conventional warfare, irregular warfare, and expeditionary COIN are required.

Warfare Terms Defined

Conventional warfare:

> Conventional or "regular" warfare is a form of warfare between states that employs direct military operations to defeat an adversary's armed forces, destroy

[7]Jenkins, *The Unchangeable War*, 4.

an adversary's war-making capacity, or seize territory in order to compel a change in an adversary's government or policies.[8]

Irregular warfare:

Irregular warfare is a violent struggle among state and non-state actors for legitimacy and influence over the relevant populations. Irregular warfare is a form of warfare that encompasses insurgency, counterinsurgency, terrorism, and counterterrorism. The nature of irregular warfare does not rely solely on military prowess but requires national governments and militaries to achieve levels of unified action that are capable of integrating all available instruments of national power to address irregular threats.[9]

Expeditionary COIN:

A military force deployed from its home bases to conduct a COIN campaign abroad. Integral to this definition is the idea that the expeditionary force's home country does not usually perceive an existential threat. The lack of existential threat spawns the expeditionary force's limited objectives. Limited objectives arise from restrictions on the amount of blood, treasure, and time that an expeditionary force can spend based on perception of return on investment. The limits also affect how many casualties can be inflicted. Irregular enemies generally do not abide any limitations on their conduct of war. As the antagonist, an irregular enemy's ability to protract war is derived from assumptions that the protagonist must observe limited objectives and thus restrict his conduct in war. By taking advantage of the expeditionary force's limitations, irregular force can often turn weaknesses into strengths and vice versa.[10]

With definitions established, it is helpful to understand context of each case study by examining the most useful sources regarding helicopter employment in Algeria, Vietnam, and Afghanistan.

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[8]Robert M. Cassidy, "Counterinsurgency and Military Culture: State Regulars versus Non-State Irregulars," *Baltic Security and Defense Review* 10 (2008): 55, http://connection.ebscohost.com/c/articles/34013163/counterinsurgency-military-culture-state-regulars-versus-non-state-irregulars (accessed 10 May 2013).

[9]Ibid.

[10]Derived from classroom discussion during R600 Art of War curriculum, 15 February through 8 March 2013.

Literature Review

For brevity, the sources are listed by conflict, with most informative sources first. Additionally, each conflict's section contains reviews of at least two primary and one secondary source. Concerning Algeria and Afghanistan sources, the author had to rely heavily on secondary sources due to linguistic limitations. The sources reviewed below should be considered minimum reading to understand helicopter employment during the respective conflicts.

Algeria Sources

The First Helicopter War by Charles Schrader is the pre-eminent English language source about the application of helicopters in Algeria.[11] *The First Helicopter War* is a well-researched book that compiles all the necessary background information in one easy to read and entertaining format. For English language primary source material, the Vertol Corporation's report "French Army Helicopter Operations in Algeria: June 1956-September 1959" and the Rand Corporation's "Symposium on the Role of Airpower in Counterinsurgency and Unconventional Warfare: The Algerian War" are the most informative regarding helicopter operations.[12] These sources are necessary reads for anyone seeking to understand helicopter employment in Algeria.

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[11]Charles R. Shrader, *The First Helicopter War: Logistics and mobility in Algeria, 1954-1962* (Westport, CT: Praeger, 1999).

[12]Vertol Corporation, Report # SM-406, *French Army Helicopter Operations in Algeria: June 1956-September 1959*; A. H. Peterson, G. C. Reinhardt, and E. E. Conger, ed., Memorandum RM-3653-PR, *Symposium on the Role of Airpower in Counterinsurgency and Unconventional Warfare: The Algerian War* (Santa Monica, CA: RAND Corporation, 1963).

Vietnam Sources

The Center for Military History's publication, "Vietnam Studies: Airmobility 1961-1971" by John J. Tolson's was the most useful single source regarding helicopter employment in Vietnam.[13] *Unchangeable War* by Brian M. Jenkins was useful overall to explain the shortfalls of tactics and strategy in Vietnam. For primary sources, the Joint Evaluation Group's "Vietnam Operational Evaluation of Armed Helicopters" and the Army Concept Team's "Armed Helicopter Reconnaissance and Area Surveillance" were useful to understanding the tactical application of armed helicopter employment in Vietnam."[14] *How the Helicopter Changed Modern Warfare* by Walter J Boyne deserves honorable mention as a solid compilation of rotary wing employment in Vietnam, and it includes sections on Algeria and Afghanistan.[15]

Afghanistan Sources

The best English language source regarding helicopter usage in Afghanistan is The Russian General Staff's *The Soviet-Afghan War: How a Superpower Fought and Lost*.[16] This book's sections on Soviet airmobile units and army aviation were

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[13]John J. Tolson, *Vietnam Studies: Airmobility 1961-1971* (Washington, DC: Department of the Army, 1999).

[14]Joint Evaluation Group, *Vietnam Operational Evaluation of Armed Helicopters* (Vietnam:1963), Howard Burbank Collection, http://www.virtualarchive.vietnam.ttu.edu (accessed 24 January 2013), Annex C, 3; Army Concept Team in Vietnam, *Armed Helicopter Reconnaissance and Area Surveillance* (Vietnam: 1965), Glen Helm Collection, http://www.virtualarchive.vietnam.ttu.edu (accessed 23 January 2013), 6.

[15]Walter J. Boyne, *How the Helicopter Changed Modern Warfare* (New York: Giniger, 2011).

[16]Russian General Staff, *The Soviet Afghan War*.

indispensable to understanding Soviet helicopter operations. Additionally, the Frunze Academy's *The Bear Went Over the Mountain* along with Ali Ahmad Jalali and Lester W. Grau's *The Other Side of the Mountain* provided solid insight to Soviet airmobile tactics and helicopter employment techniques.[17] Honorable mention goes to Robert F. Baumann's "Russian-Soviet Unconventional Wars in the Caucasus, Central Asia, and Afghanistan.[18] Replete with examples and solid analysis, this source also added insight regarding helicopter usage.

The Problem

Expeditionary COIN is unique from most conflicts because the expeditionary forces' parent country rarely perceives an existential threat.[19] The lack of perceived threat limits the expeditionary forces' objectives, resources, and conduct. With these limitations, the COIN protagonist gives up some military initiative by granting insurgents and guerrillas the ability to protract war.[20] This description defines the conflicts in Algeria, South Vietnam, and Afghanistan. Border restrictions were strong examples of

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[17]Frunze Academy, *The Bear Went Over the Mountain: Soviet Combat Tactics in Afghanistan*, ed. and trans. Lester W. Grau (Ft. Leavenworth, KS: Foreign Military Studies Office, 2005); Ahmad A. Jalali and Lester W. Grau, *The Other Side of the Mountain: Mujahideen Tactics in the Soviet-Afghan War* (Quantico, VA: United States Marine Corps Studies and Analysis Division, 1995).

[18]Robert F. Baumann, Leavenworth Papers #20: *Russian-Soviet Unconventional Wars in the Caucasus, Central Asia, and Afghanistan* (Ft. Leavenworth, KS: Combat Studies Institute, 1993).

[19]Classroom discussion during R600 Art of War curriculum 15 February through 8 March 2013.

[20]Geoff Demarest, *Winning Insurgent War: Back to Basics* (Ft. Leavenworth, KS: Foreign Military Studies Office, 2011), 38.

political limitations that ensured irregular forces' initiative because counter-insurgents could not pursue across international borders. The ALN, VC, and PAVN, and Mujahideen forces paid no heed to borders, using cross border sanctuaries to decisive advantage.[21] By restricting pursuit of insurgents, helicopters and airmobile troops could not inflict decisive results in the face of self-imposed political limitations that sheltered the enemy.

To overcome the loss of military initiative, French, American, and Soviet forces needed to seize political initiative. Victory in expeditionary COIN required a more balanced approach where political pursuits were as important as killing the enemy, but with their conventional mindsets, the armies in question naturally committed their helicopters in pursuit of enemy-focused decisive victory. The enemy-focused conventional militaries were bad at pursuing politico-strategic objectives. Concerning rotary wing forces, it was unrealistic to expect that helicopters could affect political success decisively. In fact, conventionally organized rotary wing forces often thwarted political goals by distracting commanders with military domination. Military dominance rarely guarantees success in irregular warfare.[22] Instead, success in irregular warfare requires synergy between government and military efforts to achieve political goals.

The French, American, and Soviet approaches to expeditionary COIN failed because each country was unable to coordinate their political and military efforts.[23] Each

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[21]Thomas A. Bruscino, Jr., Occasional Paper #17, *Out of Bounds: Transnational Sanctuary in Irregular Warfare* (Ft. Leavenworth, KS: Combat Studies Institute, 2006), 7, 37, 69.

[22]Jenkins, *The Unchangeable War*, 4.

[23]Cassidy, "Counterinsurgency and Military Culture," 55.

of these militaries put their faith in helicopters to carry the day, but helicopters could only ensure tactical military dominance. Blinded by airmobile success, which reinforced the traps of conventional doctrine and organization, the French Armed Forces, U.S. Army, and Soviet Army latched onto tactical dominance as the key to victory. This approach distracted them from successful strategy in expeditionary COIN.

CHAPTER 2

FRENCH HELICOPTERS VERSUS THE ALN

> Military tactics and hardware are all well and good, but they are really quite useless if one has lost the confidence of the population among whom one is fighting.[24]
>
> — Bernard B. Fall

The French war in Algeria featured the first large scale use of helicopters in combat operations. Overall helicopter strength in Algeria rose from four in 1955 to over 600 in 1962.[25] Helicopter employment roles included utility, reconnaissance, and attack. All of the missions in question flew in support of ground forces engaged in an expeditionary COIN campaign. The unique terrain of Algeria and an elusive insurgent enemy invited rotary wing innovation to address these problems. Helicopter operations in Algeria marked a turning point regarding helicopter effectiveness and employment.

Prior to the mid 1950s, technology and manufacturing limitations hindered helicopter carrying capacity, speed, range, and overall effectiveness. The usefulness of helicopters increased greatly throughout the 1950s, driven by technological advances that were put to the test in Algeria. Algeria was a strong test case for rotary wing organization and application. Prior to the French experience, aviation experts around the world assumed that helicopters were too fragile for combat. The French Army dispelled this

[24]Trinquier, *Modern Warfare*, ix.

[25]Shrader, *The First Helicopter War*, 77.

myth, flying 37,000 hours between June of 1956 and September 1959 at loss of only sixteen helicopters.[26]

The French also pioneered rotary wing employment and maintenance techniques, decentralizing aviation support to units as low as battalion. The effect of helicopters on the insurgent *Armée de Libération Nationale* (ALN) was pronounced, and the air assault emerged as a decisive mission in COIN operations. Strong mobile reserves able to deploy quickly via helicopter allowed the French to regain tactical and operational initiative from the ALN giving French forces an asymmetrical advantage in tactical mobility that their enemies could not match.

French and Algerian History

The French established colonial rule in modern day Morocco, Algeria, and Tunisia during the 1830s after taking control of the area from the Ottoman supported Government.[27] Algeria had a unique status within the French empire since it was not officially a colony. As a department of France, Algeria enjoyed the benefits of a French state, although the benefits mostly accrued to those of European descent.[28] France controlled most of North Africa peacefully until after World War II. On Victory Europe day in 1945, the Setif rebellion was the first major violence marking Algerian nationalist discontent.[29] French forces put down the uprising violently and the event became a

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[26]Shrader, *The First Helicopter War*, 123.

[27]Peterson, Reinhardt, and Conger, Memorandum RM-3653-PR, 1.

[28]Boyne, *How the Helicopter Changed Modern Warfare*, 69.

[29]Alistair A. Horne, *Savage War of Peace: Algeria 1954-1962* (New York: Viking Press, 1978), 24-25.

rallying cry to unite the Algerian nationalist cause prior to the open hostilities beginning in 1954.

Halfway around the world, the Viet-Minh rebellion in Indochina was to have an encouraging and indirect effect on the Algerian independence movement by capturing the attention of France and its armed forces. The distraction of the First Indochina War (1946-54) had a strong influence on the future of French colonialism in North Africa. While the French political and military establishments focused on Asia, independence movements in Tunisia, Morocco, and Algeria grew.[30] The effects of Tunisian and Moroccan independence movements on the Algerian nationalist movement were significant, particularly in 1956 when Tunisia and Morocco declared independence from France. The advent of independent Arab nations on the eastern and western borders of Algeria greatly increased both internal and external pressure for an independent Algeria. Additionally, Tunisia and Morocco eventually became integral to the training and resupply of the ALN.[31]

The situation in Algeria boiled over in 1954 following the creation of the *Fronte de Libération Nationale* (FLN). On 1 November 1954, the FLN conducted attacks on military and police targets across northern Algeria, marking the official beginning of the French Algerian war.[32] The French government was slow to recognize the significance of the insurgency in Algeria and only increased the number of French forces from 58,000 to

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[30]David Galula, *Pacification in Algeria 1956-1958* (Santa Monica, CA: Rand Corporation, 1963), viii.

[31]Bruscino, Occasional Paper #17, 7.

[32]Boyne, *How the Helicopter Changed Modern Warfare,* 70.

73,500.[33] Any illusions as to the resolve of FLN backed insurgents dissolved following the Battle of Phillippeville where FLN guerillas attacked and killed 122 civilians including women and children.[34] French reprisals claimed the lives of 1,273 Muslims.[35] From this point on the war in Algeria took a darker turn. Within eighteen months of the Battle of Phillippeville France doubled the number of ground forces in Algeria to 180,000.[36] By 1961, at peak troop strength, France employed over 400,000 troops in Algeria.[37]

French Rotary Wing History Prior to 1955

Prior to the mid 1950s, French military use of helicopters was limited because France did not manufacture appreciable numbers of rotary wing aircraft. The only notable example of French helicopter employment was during the French Indochina War.[38] Restrictive terrain and jungles limited the mobility of French forces, so they sought alternative methods of movement and resupply enabled by the helicopter. The French military's use of helicopters began with the employment of small single-pilot aircraft for casualty evacuation. By 1954, France was operating forty-two American made helicopters in Indochina. Most of the helicopters employed during this period were

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[33]Shrader, *The First Helicopter War*, 41.

[34]Horne, *Savage War of Peace*, 122.

[35]Ibid.

[36]Shrader, *The First Helicopter War*, 41.

[37]Ibid.

[38]Stanley S. McGowen, *Weapons and Warfare: Helicopters, An Illustrated History of their Impact* (Santa Barbara, CA: ABC-CLIO, 2005), 85.

mediocre, cursed with weak engines for operations in a hot climate that placed limits on carrying capacity.[39] Helicopters usually performed medical evacuation, search and rescue, and light resupply operations. French military thought on the operational uses of helicopters began in Indochina, but had progressed slowly due to a lack of available equipment. At the beginning of 1955, there were only four French army helicopters in Algeria.[40]

Algeria's Operational Environment

The strategic goals of French forces in Algeria included restoration of order and maintenance of French rule. Specific taskings included protection of people and property, containment of rebellion, control of the lines of communications, urban security, and the destruction of rebel forces.[41] At the tactical and operational levels, French forces applied three progressive techniques to achieve their strategic goals: *quadrillage*, which partitioned Algeria into zones in which assigned French units would conduct clear and hold operations;[42] *barrages*, which were fortified fence lines along the Moroccan and Tunisian borders; and the creation of significant mobile helicopter borne reserves.[43] The

[39]Ibid.

[40]Shrader, *The First Helicopter War*, 77.

[41]Ibid., 38.

[42]Galula, *Pacification in Algeria 1956-1958*, 230.

[43]Shrader, *The First Helicopter War*, 227-228.

most common missions flown included air movement, medical evacuation, re-supply, command and control, reconnaissance, security, and artillery spotting.[44]

Concerning the enemy, the FLN was the political movement and the ALN served as the military arm. These elements were the primary organizational enemies of the French in Algeria. The respective political and strategic goal of the FLN and ALN was the achievement of an independent and sovereign Muslim state of Algeria.[45] To accomplish the strategic aims the ALN attempted to apply Mao Zedong's three phases of revolution including organization and preparation, terrorism and guerilla warfare, and conventional warfare.[46] The FLN applied the first phase until 1954 when the conflict moved to phase two following the formation of the ALN. Excluding the few large unit attacks by the ALN on the Morice barrage in 1957-58, the conflict never escalated to the phase three concept of sustained conventional war. The phase two tactics of terrorism and guerilla war constituted most ALN operations within Algeria for the majority of the conflict. ALN forces mostly practiced “hit and run” attacks using rapid strikes that faded into the civilian populous to create the temporal asymmetric advantages the ALN enjoyed over the French.[47] Surprise was the ALN’s key advantage, realized by their ability to choose the time and place of battle during ambush or terror attacks.

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[44]Ibid., 123.

[45]James R. Arnold, *Jungle of Snakes: A Century of Counterinsurgency Warfare from the Phillipines to Iraq* (New York: Bloomsbury Press, 2009), 90.

[46]Shrader, *The First Helicopter War*, 146. Also see Mao Zedong’s *On Guerrilla Warfare*.

[47]Arnold, *Jungle of Snakes*, 102.

Battalions, companies, and platoons made up the basis for ALN structure. Initially, the most common enemy formations were company-level units called *katibas* of 90-120 men. As the war progressed, smaller commando units of ten to fifteen men became a more commonly encountered formation because airpower located and destroyed larger assemblies. ALN soldiers were categorized into three types including paid volunteers called *moudjahidine*, unpaid auxiliaries called *mousseblines*, and terrorist cells called *fidayine*.[48] At peak strength levels, the ALN fielded an estimated 40,000 personnel within Algeria.[49] During early years of the conflict, the ALN relied heavily on bases in Tunisia and Morocco for logistical support and training. French border fence efforts along with the impassability of the Sahara desert would challenge the logistic support from the sanctuaries in Morocco and Tunisia. In the case of Algeria, terrain eventually worked against the insurgent.

Algeria's landmass encompassed 2,204,864 square kilometers, roughly four times the size of France.[50] Algeria is bordered by Tunisia and Libya to the east, Morocco and Mauritania to the west, and Niger and Mali to the south. The northern portion of the Algerian borders with Tunisia and Morocco were the most significant, as almost 90 percent of Algeria is in the Sahara desert. The Mediterranean coast is hilly and dominated by cliffs in the east with a narrow coastal plain adjacent to the coastline. Immediately behind the coastline are the Tellian Atlas Mountains and a line of plains and high

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[48]Edgar O'Ballance, *The Algerian Insurrection, 1954-62* (Hamdon, CT: Archon Books, 1967), 13.

[49]Peterson, Reinhardt, and Conger, Memorandum RM-3653-PR, 14.

[50]Shrader, *The First Helicopter War*, 5.

plateaus. Further inland are the Sahara Atlas Mountains, south of which is the Sahara desert. Most of Algeria's land is between 800 and 1600 meters above sea level.[51] Most of the area north of the Saharan Atlas Mountains is difficult to traverse, especially on foot. Mountain, desert, forested, and urban areas are the terrain types that most affect aircraft usage. Additionally, the hot climate, dust storms, and the high altitude of the mountains adversely affected aircraft performance. Negative terrain and weather effects translated to fewer troops carried by helicopters. The positive effect of Algeria's Sahara dominated landscape was that France only needed large troop concentrations in the northern populated areas of the country.

The population of Algeria grew from eight and a half million in 1954 to almost ten million in 1960 with approximately 30 percent urbanized.[52] The population encompassed three main ethnic groups including Berbers, Arabs, and Europeans. As of 1960, the Muslims made up 89 percent of the population. The Berbers are worth noting because they were Muslim converts with a Christian heritage and generally pre-disposed to support the French.

Regarding political considerations, it is likely that the military leadership assumed Algeria being sovereign French territory meant they had unlimited time to subdue the insurgents and restore control. Aviation assets were one theoretical way to shorten the war by establishing superior mobility over the ALN. Time would become increasingly important as the war progressed, culminating with the election of Charles DeGaulle as president of France in 1958. DeGualle, under domestic and international pressure,

[51]Ibid., 8.

[52]Ibid., 13.

demanded a speedy end to the conflict to placate political interests. It is interesting to note that as French political urgency decreased available time, the French military used helicopters in greater numbers and with greater frequency in an attempt to end the war.

Concerning military organization, the French government delegated command of Algeria to the 10th Military Region, which divided the country into three corps areas including Algiers, Oran, and Constantine, while creating a separate autonomous command for the Sahara region.[53] Each corps area was further broken down into departments manned by division level units and districts operated by regiments. At its peak troop strength of 400,000 French soldiers, 180,000 were involved in *quadrillage*, 80,000 operated the *barrages*, 20,000 constituted the mobile reserves, and the remaining balance were headquarters and support staff.[54]

French Rotary Wing Organizational Structure in Algeria

French helicopter types were an eclectic mix of cargo and utility helicopters, mostly of U.S. manufacture. The helicopter types included the H-13 Sioux, Alouette II, H-19 Chickasaw, H-21 Shawnee, and H-34 Choctaw. The army preferred the heavy H-21s and the air force liked the medium H-34. Most of the helicopters eventually mounted weapons in one form or another.[55]

As of 1959, the French Air Force and Navy operated 158 helicopters under the 5th air region, subdivided to support tactical air groups called *Groupment Aèrien*

[53]Ibid.

[54]Peterson, Reinhardt, and Conger, Memorandum RM-3653-PR, 13.

[55]Shrader, *The First Helicopter War*, 116-122.

Tactique (GATAC). Each army corps area received support from one of the five GATACs. Each GATAC was scalable consisting of squadrons that supported advanced air commands (AAC). AACs were joint organizations built for specific operations, ground units, and areas of support.[56]

The French Army operated most of its 140 helicopters under the *Groupement d' Aviation Légère de l'Armée de Terre* (GALAT) 101. The building block of Army helicopter organization within the GALAT was the *Détachments d'Intervention Hélicoptèr* (DIH), made up of six to eight helicopters.[57]

French Use of Helicopters in the Utility and Assault Roles

In the spring of 1955, the French augmented the small number of rotary wing aircraft in Algeria with air force and navy helicopters to include eighteen Bell Model 47Gs and eighteen Sikorsky H-19s.[58] The additional rotary wing aircraft were used in the first successful air assault in Algeria, which occurred 4 May 1955, when the French Foreign Legion air assaulted near a rebel mountain outpost. The movement took less than twenty minutes as compared to the two days the same move would have required on foot.[59] Operations such as this, along with French rotary wing experiences in Indochina, cemented the helicopter's usefulness in the minds of French leaders. From 1955 until the

[56]Ibid.

[57]Ibid.

[58]Boyne, *How the Helicopter Changed Modern Warfare*, 71.

[59]Ibid.

end of the war in 1962, the French use of helicopters increased to a level that far exceeded helicopter use in all previous conflicts combined.

The increased French commitment to operations in Algeria during 1955 included an army purchase order for 100 Vertol H-21 transport helicopters. In 1956, following the delivery of the H-21s, France commissioned a study by the Vertol corporation to determine the effectiveness of rotary wing aircraft.[60] This study marked the first attempt by the French to codify, organize, and optimize their rotary wing operations and organization. This purchase of army helicopters also started to underline the split between French air force and army helicopters. Throughout the conflict, differing priorities between the army and air force created a split capability. The army preferred the H-21 while the air force and navy wanted the H-34. Army units preferred the H-21 because it was could land a full squad of thirteen troops versus the H-34 that could only carry eight to ten troops.[61]

The organization of helicopters into the *Détachments d'Intervention Hélicoptèr* (DIH) was one of the first elemental changes made by French forces.[62] A DIH most often included six utility aircraft along with two light reconnaissance and C2 aircraft. Each DIH possessed organic maintenance infrastructure and personnel, allowing the unit flexibility to operate in the field with minimal outside support. The DIH enabled aviation flexibility, which allowed wider helicopter disbursement. Additionally, the advent of the

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[60]Shrader, *The First Helicopter War*, 77.

[61]Vertol Corporation, Report # SM-406, 37.

[62]Carl J. Horn, *Military Innovation and the Helicopter: A Comparison of Development in the United States Army and Marine Corps* (Ph.D. diss., Ohio State University, 2003), 314.

DIH allowed helicopter units to move closer to a given mission area when needed. This disbursement of rotary wing assets provided better organic support to the ground forces. In addition, the French established large numbers of helicopter refuel and rearmament points to support such employment. For instance, the western tactical area covering Oran and part of Algiers had eighty helicopter refueling points by the end of the war.[63] The wide disbursement of helicopter units, the mobility of organic DIH support, and ready access to refuel stations all served to shorten the reaction time of rotary wing assets.

To reduce reaction times further, French forces began pairing ground reserves and DIHs in the same place, with both units on a fifteen-minute alert.[64] The disbursement and quick reaction of helicopter borne reserves meant that no location in north Algeria was further than thirty to sixty minutes away from an air assault or reinforcement. This would become important to expeditionary COIN efforts, as the shortened reaction time of French helicopters and their mobile reserves was integral to reducing ALN battlefield effectiveness after 1957. Air assault operations limited the ALN's ability to mass combat power against the French. Before 1957, it was not uncommon for the ALN to engage French forces with *Katiba* sized elements. From 1958 to late 1959, enemy movements larger than platoon size were spotted by air reconnaissance and stopped using vertical envelopment techniques. Following the year 1959, no ALN unit bigger than a platoon fought against French forces.[65]

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[63]Peterson, Reinhardt, and Conger, Memorandum RM-3653-PR, 31.

[64]Ibid., 34.

[65]Ibid.

Effective higher-level French helicopter organization optimized the efficiency of helicopter employment. Specifically, the responsiveness of helicopters in Algeria increased due to the delegation of decision making regarding helicopter employment. As the number of helicopters in Algeria increased and their deployment locales dispersed, higher commands often delegated launch authority to lower levels. In order of unit size the GATACs paired with corps, the AACs paired with a divisions, and Air Directing Posts paired with regiments or smaller size units (See appendix C). Joint Operations Centers existed at both the corps and division level. Most mission and launch decisions were delegated to subordinate AACs or air directing posts depending on the mission, with DIHs often assigned to a specific battalion or company. This decentralization of decision-making increased responsiveness and allowed each unit to tailor mission support as necessary.[66] The result was a short response time for aviation missions such as the air assault.

French helicopters flew multiple mission types as directed by their assigned command, including air movement and assault, medical evacuation, re-supply, and command and control (C2). These mission types helped to preserve the force and worked to sustain friendly morale by limiting risk to soldiers. Soldiers and supplies moved by air rarely experienced an ambush. Additionally, casualties evacuated by air had a greater chance of survival. While air movement, medical evacuation, and resupply missions are important with respect to morale, these missions were not a decisive enabler of expeditionary COIN operations at the tactical level. The C2 mission as a COIN enabler is worth examining in the respect that it greatly increased the situational awareness of the

[66]Boyne, *How the Helicopter Changed Modern Warfare,* 72.

helicopter mounted unit commander concerning air assault and reconnaissance missions. Command and Control was important enough that each DIH included two light helicopters, one of which would usually fill the role of C2. The C2 mission contributed to the efficiency of air assaults, although it was of secondary importance as a ground force enabler.

Air assault missions were important to French expeditionary COIN operations. Initially, the French use of helicopters in the air assault role was reactive. Helicopter borne troops moved to reinforce elements that had come under attack or to chase ALN groups that attempted to cross the borders of Tunisia and Morocco. These efforts while important, left initiative on the battlefield with the ALN.

As the war progressed, air assault missions became more proactive. Reconnaissance aircraft and intelligence assets would identify ALN elements in the field that were targeted by specifically-tailored air assault missions.[67] The general idea of these operations was to fix the enemy in place with blocking positions and air power, followed by a ground assault to "close the net." French troops would air assault into blocking positions near the enemy. Ground forces would simultaneously move into positions along likely enemy withdrawal routes and would start moving toward the middle, "closing the net" until the insurgents were captured or killed.[68] Air assault operations restored French initiative to the battlefield.

Use of the helicopter was integral to French efforts toward gaining and maintaining initiative on the battlefield. The air assault brought the element of surprise

[67]Shrader, *The First Helicopter War*, 217.

[68]Peterson, Reinhardt, and Conger, Memorandum RM-3653-PR, 35-37.

back into French operations. Due to the nature of an emerging insurgency, identification of enemy attack preparations is often difficult. The illusive nature of insurgents combined with the French adoption of manpower-intensive *quadrillage* tactics, ensured disbursement of French ground forces. Not only were the disbursed forces more vulnerable to attack, they often found themselves reacting to enemy actions because they had trouble massing combat power in a timely fashion. The reality was that during the early stages of the war, the ALN continuously surprised French ground forces with local superiority. Once local superiority was in doubt, ALN forces would fade into the civilian populace before superior French firepower became effective.

The helicopter enabled the French to identify and react to massing ALN forces prior to an attack. The French regained initiative because instead of French outposts being surprised by the ALN, ALN forces were surprised by air assaulting French paratroopers or Legionnaires.[69] Integral to the surprise was the ability to concentrate forces quickly in a fashion only achievable with helicopters. The ALN could not match this advantage and without effective organic air defense, they had difficulty defending against the air assault. The French were also able to extend the surprise provided by air assaults to enemy encampments within Algeria, thereby reducing ALN access to sanctuary, a crucial element to an effective insurgency. The use of helicopters to overwhelm the enemy by surprise air assaults culminated in the Challe plan.

General Maurice Challe, appointed by President De Gaulle as commander of the 5th air region in late 1958, instituted a plan to create a mobile strategic reserve made up of 20,000 elite troops. Challe faced resistance from subordinate commanders because

[69]Boyne, *How the Helicopter Changed Modern Warfare,* 72.

each was expected to contribute some of their best troop and helicopter units. In his plan, General Challe demonstrated understanding of the helicopter's potential by creating helicopter-borne mobile reserves. General Challe instituted his plan on 5 February1959. Massive clear and hold operations combined with air assaults to find, fix, and destroy the enemy were a prominent feature of the plan. Between the beginning of the Challe plan and the end of 1959, ALN strength fell from a peak of 40,000 to less than 12,000 fighters.[70] Following the Challe plan, the ALN was only marginally effective, with acts of terrorism as their only remaining tool. The helicopter, via the air assault, had found its dominance in expeditionary COIN.

French Use of Helicopters in the Reconnaissance and Attack Roles

Prior to 1955, the French did not use helicopters for reconnaissance or attack. The helicopters deployed to Algeria initially were utility airframes were not used for missions other than air movement, medical evacuation, and resupply. As more helicopters became available and air assault missions became prevalent, it was only natural that pilots started intelligence reporting regarding enemy sightings. Air assault missions also brought pilots into close proximity with the enemy. Proximity to the enemy highlighted the need for defensive weapons mounted on some of the helicopters, as fixed wing aircraft were inadequate due to high speeds and lack of loiter time.[71] This led the French to employ aircraft in the attack and reconnaissance roles.

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[70]Peterson, Reinhardt, and Conger, Memorandum RM-3653-PR, 8.

[71]Shrader, *The First Helicopter War*, 124.

Concerning aircraft in the attack role, initial attempts to arm French aircraft consisted of Bell Model 47 medical evacuation aircraft with machine gunners sitting on the stretchers. As the war progressed, the most common armed helicopters were H-34s armed with a door mounted 20mm cannon and H21s armed with forward firing 37mm rockets and thirty caliber machine guns. The French also pioneered the use of helicopter-launched missiles by mounting wire guided AS11s the on Alouette II to hit insurgents in caves or under overhangs.[72] Eventually the French settled on a ratio of one to four armed aircraft versus utility helicopters when flying missions.[73] As stated previously, the French operated only utility aircraft, which meant that any helicopter could mount weapons if needed. As missions evolved, the progressive arming of helicopters was put into practice during air assaults. Specifically, once a helicopter completed its troop movements it would return to base, arm, and assume reconnaissance and or attack mission types until needed for troop pickup.[74]

The primary reconnaissance helicopter was the Alouette II. Alouettes would accompany air assault missions in the C2 role with the ground force commander on board and would also conduct reconnaissance. The reconnaissance mission evolved as the war progressed to include the use of armed aircraft to conduct area reconnaissance near landings zones (LZ) prior to ground troop insertion. Armed aircraft would continue with area security following insertion, in an effort to protect landing aircraft and recently-landed troops. In later stages of the war, at least two armed helicopters accompanied most

[72]Boyne, *How the Helicopter Changed Modern Warfare*, 74.

[73]Peterson, Reinhardt, and Conger, Memorandum RM-3653-PR, 40.

[74]Ibid., 36.

assault missions.[75] The armed helicopters not only provided security along the route of flight and reconnaissance of the LZ, they would also remain on station throughout the raid, hunting down errant ALN elements. Artillery spotting was a reconnaissance mission, conducted in conjunction with other assigned missions.

The French were pioneers in the realm of employing helicopter in the reconnaissance, security, and attack roles, and they were the first army to mount and use weapons from helicopters on a large scale. The French credit much of their air assault success to the reconnaissance, security, and overall tactical superiority afforded by their helicopter gunships.[76] Helicopters gunships demonstrated usefulness in expeditionary COIN by discouraging overt enemy activity whenever they were present. The French achieved a winning combination with helicopter gunships and rotary wing enabled tactical mobility.

Tactical Case Study: Air Assaults at *Dgebels Ergou*, *el Aloui*, and *el Azega*

Most French pilots learned helicopter employment and air assault techniques on the job in Algeria. Military use of helicopters was new to the 1950s French army and they refined their techniques over time. French pilots and ground commanders disseminated what they knew during training at flight school and in country. It is useful to examine rotary wing employment techniques from both the ground force and pilot perspectives.

From the ground commander's perspective, it was always advantageous to have a DIH organically assigned a given unit, usually of regimental size. Command structures

[75]Ibid,. 38.

[76]Ibid., 37.

with organic helicopter assignments promoted habitual and well-developed working relationships, which made air assault planning easier.[77] Ground commanders also expressed concerns surrounding the use of troops not trained for air assault missions.[78] The French solution to the problem of untrained troops was to employ only elite parachute infantry and Foreign Legionnaires who were specially trained in the use of helicopters as the first wave for any air assault.[79] Untrained troops, if required, would land in successive waves following the establishment of LZ security by the first wave. For disembarking under fire, French ground force tactics, techniques, and procedures (TTP) articulated the need for five actions including: the soldier must achieve "killing" mind frame prior to landing, the necessity for rapid offloading of the helicopter, the requirement to disperse and seek cover immediately after offloading, to shoot covering fire for successive landings, and to leave enough space on the LZ for successive troops to offload.[80] French leaders were adamant that air assault forces must conduct the preceding steps automatically, hence the need for prior training. French ground forces saw the need for extensive planning prior to an air assault. This is where the habitual relationships between specific ground and aviation units paid dividends because the troops and pilots that understood each other's procedures and preferences needed less preparation prior to a mission. Developed relationships reduced both planning and reaction times.

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[77]Vertol Corporation, Report # SM-406, Appendix A, 5.

[78]Ibid., 34.

[79]Ibid.

[80]Ibid., 35.

From the aviation commander's perspective, the conditions and enemy in Algeria also informed aviation TTPs. One of the unique features of fighting an expeditionary COIN campaign against the ALN in Algeria was the enemy's lack of large caliber anti-aircraft weapons or missiles. The largest threat posed to most helicopters was from .30 caliber machine guns.[81] The practical effect of the ALN's lack or anti-aircraft capability was that French helicopters mostly flew at altitudes greater than 1500 feet above the ground while avoiding contour flight until on approach to an LZ.[82] These tactics provided French helicopters the ability to move with relative impunity, only exposing themselves to danger near a landing zone. Preparation fires mitigated LZ dangers by suppressing ALN forces near the touchdown point. Prior to arrival of the air control officer, the ground or aviation embarked commanders in C2 aircraft controlled LZ fires as necessary. The C2 aircraft was the primary venue for air-ground integration (AGI) prior to a ground forces landing on the LZ, after which an air controller took over. The ground commander usually rode one of the DIH's Alouette II aircraft, with the aviation commander mounting the second of two. The ground commander controlled the fight from the air during the initial phases of the assault with the added benefit that he could insert anywhere on the battlefield at his convenience.[83] For LZ preparation, French leaders expressed a preference for CAS and armed helicopters over artillery stating that guerilla operations present few targets suitable for artillery employment.[84] Aviation leaders, like their ground

[81]Ibid., 30.

[82]Peterson, Reinhardt, and Conger, Memorandum RM-3653-PR, 37.

[83]Vertol Corporation, Report # SM-406, 44.

[84]Ibid.

force counterparts, were also convinced of the need for organic command relationships. The aviators believed that close relationships educated ground commanders and their staffs regarding helicopters employment, with superior operational results.[85]

Concerning air assaults, surprise was a guiding principle, hence the preference toward landing in the midst of the enemy. The sequence of events prior to the launch and execution of a representative French air assault in Algeria were as follows: a briefing involving ground and air leaders (average move 200-300 troops), helicopters spin-up, air controller initiates CAS preparation of LZ prior to launch (average distance to LZ is 15km), Alouettes for C2 and reconnaissance launch first followed by assault aircraft, helicopters travel in echelon formation at greater than 1000 ft to the release point, CAS stops shooting when helicopters reach release point, armed helicopters fire rockets to keep enemy suppressed and drop smoke to show wind conditions, first assault helicopter lands 100-300 yards behind last rocket pass with successive aircraft as permitted by the LZ, assault aircraft depart to pickup successive waves, and lastly the Alouettes remain on station for C2 and reconnaissance.[86]

To underline the TTPs previously presented, the French engagement to destroy an ALN *katiba* at *Dgebels Ergou, el Aloui,* and *el Azega* on 31 March 1958 is worth examining. Human sources reported that an ALN company had taken up residence near the areas in question. French forces under the command of 9th Parachute Chasseur Regiment (9e RPC) planned an air assault to annihilate the enemy. Ground forces consisted of a ground assault force and an air assault force from three units including 9e

[85]Ibid., 52.

[86]Ibid., 39-44.

RPC, the 2nd battalion, 152nd motorized infantry regiment (II/152e RIM), and the 3rd battalion, 60th infantry regiment (III 60e RI). Ground forces would establish blocking positions along likely withdrawal routes simultaneous with the first helicopter landings. The air assault planned to land at 1100 hours and included one company from II/152e RIM. The air assault would land in the midst of the enemy. The initial insertion of helicopter-borne troops drove the enemy to take flight, but it was too late as the trap was set. At 1700 hours, a company of 9e RPC conducted a second un-planned air assault to dislodge ALN forces from in strong positions on a mountain in the center of the operations zone. Again, the French air assault landed in the midst of the enemy. The fighting ceased at nightfall after the remaining ALN retired. The ALN had lost sixty-seven killed with eight captured. French forces lost four killed and two wounded.[87]

The lopsided outcome of this engagement demonstrates how French forces leveraged the advantages of surprise, mobility, and firepower to dominate the ALN on the battlefield. The French preferences for landing in the midst of the enemy while applying overwhelming air support are partly responsible for the disparity of casualties. It is also apparent that the habitual relationships between the 9e RPC and assigned aviation enabled execution of the second air assault.

The French raid near *Dgebels Ergou, el Aloui,* and *el Azega* proved the veracity of French air assault TTPs. The resultant French tactical superiority eventually marginalized the ALN across Algeria. The best testament to the effectiveness of French helicopter-borne forces came from captured ALN training pamphlets, which stated,

[87]Shrader, *The First Helicopter War*, 213.

"helicopter crews, legionnaires, and paratroopers were to be shot - not taken prisoner."[88] No higher compliment was likely to come from the ALN.

Conclusions from Algeria

Helicopters provided tactical mobility advantages that the ALN could not match. The evolutionary use of helicopters by the French was integral to their COIN tactics. Using helicopters, French forces regained tactical and operational initiative against the ALN. As the number of helicopters used by the French increased, the effectiveness of the ALN waned. Using helicopters, French forces restored the principle of surprise to their military operations while simultaneously reducing ALN's access to sanctuary. The French tactical imperatives of *quadrillage* and *barrages* both relied on mobile reserves for ultimate effectiveness. Mobile reserves increasingly meant air assaults, which served as the hammer to destroy the ALN against the anvil of either *quadrillage* or *barrages*. By most accounts, the ALN inside of Algeria was largely ineffective by 1960, with less than 12,000 active members starved of supplies facing France's 400,000 troops and 600 helicopters.[89]

French tactical successes did not translate into strategic success. French forces lavished vast resources on defeating the ALN but did very little to defeat the FLN's political control over Algerian Muslims and its message. The ALN was largely defeated

[88]Vertol Corporation, Report # SM-406, Appendix A, 47.

[89]Ibid., 8.

on the battlefield, yet FLN support in Algeria and the world at large grew.[90] Even in France, sympathy for the FLN increased calls for the war's end.[91]

As demonstrated by the French, helicopters were decisive in achieving military superiority, but the advantages gained did not translate to strategic success. The continued existence of the FLN and ALN, both inside and outside of Algeria, thwarted any perception of decisive victory for the French people. As long as the enemy existed, the fighting would not end, and for the French people this result was unacceptable. The will of the French people and the international community decided the outcome of the conflict in Algeria.

French use of helicopters against insurgents in Algeria remained conventionally focused throughout the war. Rotary wing doctrine and organizational structures also kept their conventional military focus. Helicopter enabled tactical and operational dominance was militarily decisive, but military success was not enough. Algeria gained independence from France in 1962, despite the helicopter's contributions.

[90]J. N. C. Hill, "Remembering the War of Liberation: Legitimacy and Conflict in Contemporary Algeria," *Small Wars and Insurgencies* 23, no. 1 (January 2012): 9.

[91]Arnold, *Jungle of Snakes*, 108.

CHAPTER 3

AIRMOBILITY VERSUS THE VIET CONG AND PAVN

If all you have is a hammer, everything looks like a nail.[92]

— Bernard Baruch

If the French war in Algeria represents the first large scale use of helicopters for combat operations, then the American commitment of rotary wing aircraft to the Vietnam Conflict made it a "helicopter war."[93] Throughout the Vietnam War, 11,827 helicopters flew in support of allied forces, of which 5,086 helicopters were lost.[94] Enemy fire accounted for over 2,076 helicopters downed, while accidental losses included 4,642, with the difference taken as losses in Laos or Cambodia.[95] The human toll included 3,534 aircrew and 1,755 passengers killed.[96] The staggering amount of helicopter losses demonstrates the importance of the helicopter to the war in Vietnam.

Helicopters were a cornerstone of American tactics in Vietnam, seen as a solution to the problems experienced by French Forces in Indochina during the 1950s. Helicopters would allow U.S. forces to conquer South Vietnam's uniquely inaccessible terrain and

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[92]John D. Jogerst, "Preparing for Irregular Warfare: The Futures Ain't What It Used to Be," *Air and Space Power Journal* 22, no. 4 (Winter 2009): 7, http://www.airpower.au.af.mil/airchronicles/apj/apj09/win09.htm (accessed 1 June 2013).

[93]Robert F. Dorr, *Chopper* (New York: Berkley Publishing Group, 2005), 88.

[94]Vietnam Helicopter Pilots Association, heli-loss statistics, http://www.vhpa.org (accessed 2 March 2013).

[95]Shelby L. Stanton, *Vietnam Order of Battle* (Washington, DC: U.S. Books, 1981), 347. (Many of the aircraft lost were recovered and repaired).

[96]Ibid., 346.

poor road networks. Additionally, Vietnam's relatively isolated 800-mile western border combined with limited forces to make border security a preeminent challenge. General William C. Westmoreland stated that without helicopters, efforts to secure South Vietnam's western borders with Cambodia and Laos would have required at least three times as many troops than were committed.[97] As General Westmoreland stated, the material realities of U.S. global commitments and a lack of political will limited American troop levels in Vietnam. The helicopter's lack of success regarding border security does not negate the fact that airmobility was the most viable tactic for border security, considering the resource limitations placed on the allies.

American manpower limitations and the difficult terrain of Vietnam led to the allies' heavy reliance on the helicopter for many aspects of operations to include C2, reconnaissance, maneuver, firepower, and logistics.[98] Additionally, the enemy's propensity to oscillate back and forth between company level guerilla tactics and battalion to regimental sized conventional attacks meant that allied forces could not focus solely on counter-insurgency operations. General Westmoreland prioritized American focus towards larger threats leaving pacification efforts and population security to South Vietnamese forces. His goal was to use the limited amount of troops in a war of

[97]General William C. Westmoreland (Speech, Third Annual Reunion of the Vietnam Helicopter Pilots Association, Washington, DC, 5 July 1986). (reproduced in a Vietnam Helicopter Pilots Association *Historical Reference Directory* Volume 2A).

[98]United States Army Aviation School, *Common Subjects and Reference Data for Army Aviation in the Field Army* (Ft. Rucker, AL: 1968), Howard Burbank Collection, http://www.virtualarchive.vietnam.ttu.edu (accessed 24 January 2013), 13.

movement designed to force the enemy into decisive combat and end the war quickly.[99] Instead of holding terrain and keeping ground lines of communication open, something the French were unable to do, the U.S. would use attrition to defeat the enemy. General Westmoreland decided to use American mobility and firepower advantages to fulfill his strategy of attrition. The helicopter, with its mobility and firepower, was uniquely suited to the task. The problem with attrition warfare was that it could not isolate South Vietnam's insurgents, secure its population, nor legitimize its government. The helicopter, which could provide tactical superiority, would have to overcome a questionable strategy.

History of the Twentieth Century Indochina Wars

Before examining American involvement in Vietnam, one must consider the evolutionary nature of the conflict in Southeast Asia. Indochina became a French colony during the mid 1800s and colonial rule lasted until the end of World War II. Following the fall of France in 1940, Japanese forces occupied Indochina, but left the Vichy French colonial government nominally in charge. This arrangement persisted until March of 1945 when the Japanese deposed the Vichy and installed Boa Dai, the heir to the Vietnamese throne as emperor.[100] Following the defeat of the Japanese, the Vietnamese under Ho Chi Minh declared independence from France in September 1945. The efforts toward Vietnamese independence were short-lived due to the French desire to reassert

[99]Andrew Krepinevich, *The Army and Vietnam* (Baltimore, MD: John Hopkins University Press, 1986), 167.

[100]Russel H. Fifield, "The Thirty Years War in Indochina: A Conceptual Framework," *Asian Survey* 17, no. 9 (September 1977): 860.

colonial rule. Specifically, Nationalist Chinese forces negotiated a deal with the French to occupy North Vietnam while French forces re-took South Vietnam. The plans for French colonial re-establishment met with friction. The first fighting between French and Viet-Minh forces broke out in 1946 and from 1946 to 1954, the Viet-Minh fought a guerilla campaign that progressed into open war against French colonial rule. The Viet-Minh campaign culminated in 1954 with the French defeat at Dien Bien Phu in May 1954. The Geneva settlement of July 1954 divided Vietnam into north and south portions divided at the seventeenth parallel.[101] Vietnam split into the Democratic Republic of Vietnam in the north and the Republic of Vietnam in the south with each government gaining full sovereignty from the French in October of 1955.[102]

During the last years of the First Indochina War, communist China supplied the Viet-minh war effort and trained its troops. Chinese support to the North Vietnamese ensured that the struggle in Indochina took its place within the context of the larger struggle of the Cold War. In response to Chinese support of the Viet Minh, the U.S. funded 78 percent of the French war effort in Indochina by 1954.[103] During the French War, Eisenhower strongly considered military intervention at Dien Bien Phu.[104] Chinese communist intervention in Indochina guaranteed future U.S. involvement in the region.

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[101]Ibid., 863.

[102]Dong Van Khuyen, *Indochina Monographs: The RVNAF* (Washington, DC: The U.S. Army Center of Military History, 1980), 8.

[103]Ibid., 862.

[104]Fifield, "The Thirty Years War in Indochina," 863.

Starting in 1956, America supported the Republic of Vietnam by installing a U.S. Military Assistance Advisory Group and funding the newly-formed Vietnamese army.[105] In 1955 Laos, Cambodia, and Vietnam joined the Southeast Asia Treaty Organization, a defensive pact aimed at stopping the spread of communism in places like South Vietnam.[106] In 1956, South Vietnam spurned elections guaranteed by the Geneva Accords because President Diem was afraid that too many communists would win.[107] Without these elections, a peaceful solution between North and South Vietnam was unlikely. Additionally, by not holding elections, the south challenged its own legitimacy. Increasing American support only deepened the opposition perceptions of South Vietnamese governmental illegitimacy. Fed by Vietnamese nationalism, anti-colonialism, and a perceived illegitimate government in the South, the Viet Cong (VC) began forming cells and small units. Starting in 1959, communist guerrillas supported by North Vietnam began campaigns of terror and subversion in South Vietnam.[108] The insurgency grew steadily from 1958 to 1964. The first two American casualties occurred in July of 1959.[109] Tensions between the United States and North Vietnam escalated steadily with an increased U.S. commitment going from approximately 500 advisors in 1959 to over

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[105]Khuyen, *Indochina Monographs*, 862.

[106]Archimedes L. A. Patti, *Why Vietnam?: Prelude to America's Albatross* (Berkley, CA: University of California Press, 1980), 462.

[107]Ibid.

[108]Khuyen, *Indochina Monographs*, 10.

[109]James E. Westheider, *The Vietnam War* (Westport, CT: The Greenwood Press, 2007), 141.

23,000 by 1964.[110] In August of 1964, congress approved the Gulf of Tonkin resolution, which signaled the official beginning of the Vietnam Conflict and was the catalyst for a massive American force increase. The next section will examine rotary wing equipment and tactical evolution prior to the Vietnam Conflict.

United States Rotary Wing History Prior to Vietnam

The first combat use of helicopters by U.S. forces took place between 1943 and 1945 with the acquisition of 424 Sikorsky helicopters of the R-4, R-5, and R-6 varieties.[111] These first Army helicopters operated mostly in light transport and search and rescue missions in the Pacific theater of operations. Multiple successful rescue and resupply missions proved the helicopter's usefulness, even though equipment shortcomings limited their widespread utility.[112] In 1944, Colonel H. Franklin Gregory, the first chief of the Army Air Forces Rotary Wing Branch foresaw potential uses of military helicopters in the casualty evacuation and armed combat roles.[113]

Following World War II, development of the helicopter proceeded slowly. By congressional edict, the Army had to procure aircraft through the Air Force. During the period following World War II, the Air Force focused on strategic bombing and air

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[110]Jeffrey J. Clarke, *Advice and Support: The Final Years, 1965-1973* (Washington, DC: Center of Military History, 1988), 13.

[111]James W. Williams, *A History of Army Aviation* (Lincoln, NE: iUniverse, 2000), 31.

[112]Ibid.

[113]Franklin H. Gregory, *Anything a Horse Can Do; The Story of the Helicopter* (Cornwall, NY: Cornwall Press, 1944), 242.

superiority as core missions. As a result, the Air Force did not procure an appreciable number of helicopters for either the Army or Air Force between 1945 and 1950.

At the start of the Korean War, budget constraints and Air Force resistance to the Army's aircraft procurement efforts limited the U.S. Army's organic inventory. By 1950, the Army possessed only fifty-seven operating helicopters, used mostly as artillery spotting aircraft.[114] Under the umbrella of the Navy, which could procure its own aircraft, the Marines did not face the same limitations and were far ahead of the army regarding helicopter employment.[115] Between 1947 and 1948, the Marines created and tested their first helicopter squadrons along with America's first amphibious air assault doctrine.[116] This combination of experience and doctrine enabled the Marines to conduct the world's first helicopter-borne combat movement on 21 September 1951. Operation summit moved 224 men plus equipment over four hours to the top of hill 884 in Korea, a flight fourteen-minute flight that would have taken fifteen hours by foot.[117] By the end of the Korean conflict, Marine helicopters had moved 60,046 men, 7.5 million pounds of cargo, and evacuated over 9,815 casualties.[118] The Army formed its first two helicopter transportation companies in 1952, but these units did not operate in combat until

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[114]Williams, *A History of Army Aviation*, 52.

[115]Eugene W. Rawlins, *Marines and Helicopters: 1946-1962* (Washington, DC: U.S. Marine Corps, 1976), 14.

[116]Williams, *A History of Army Aviation*, 55.

[117]Ronald J. Brown, *Whirlybirds: U.S. Marine Helicopters in Korea* (Washington, DC: Marine Corps History and Museums Division, 2003), 74-75, https://www.mcu.usmc.mil/historydivision/Pages/Forms/DispForm.aspx?ID=926 (accessed 24 May 2013).

[118]Ibid., 47-49.

February of 1953. The plan was to integrate the helicopters into operations in order to test concepts and provide mobility advantage to U.S. forces. With only six months until the end of hostilities in Korea, Army aviation gained only token combat experience, conducting air movement and medical evacuation missions.[119]

The inspiration for large-scale helicopter borne units was born from the Pentomic Division concept. Major General James M. Gavin perceived the need for ground force dispersion to deter nuclear attacks with a requirement to concentrate quickly for counter-attacks. MG Gavin's helicopter-borne "sky-cavalry" became the conceptual solution to the obstacles of the nuclear battlefield.[120] The U.S. Army attempted to prove the sky cavalry concept during a joint exercise called Sagebrush in December of 1955. The Army deemed Sagebrush a success because four helicopter air assaults jumped behind enemy lines gathering intelligence and sowing confusion.[121] Following Sagebrush, the Army created the United States Army Aviation Center at Fort Rucker, Alabama, which heralded evolutionary changes to army aviation including armed helicopter testing and the creation of sky-cavalry platoons.

The genesis for U.S. Army aviation force structure was included in the Army's Reorganization Objective Army Division (ROAD) structure, which was an attempt to standardize division types across the U.S. Army.[122] Beginning in 1961, the typical

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[119]Williams, *A History of Army Aviation*, 56.

[120]Boyne, *How the Helicopter Changed Modern Warfare*, 112.

[121]Williams, *A History of Army Aviation*, 72

[122]Robert A. Doughty, *The Evolution of U.S. Army Tactical Doctrine, 1946-1976* (Ft. Leavenworth, KS: Combat Studies Institute, 1979), 21.

Reorganization Objective Army Division structure included 101 aircraft in an aviation battalion, three brigade aviation sections, a division artillery aviation section, an air cavalry troop, and a maintenance company aviation section.[123] While this new division structure was a step forward, Army leaders, led by General Gavin believed that 101 aircraft was inadequate to service the mobility needs of a division on the modern battlefield.

To underline the modern battlefield requirement for airmobility, the Army conducted two benchmark reviews between 1960 and 1962, the Army Aircraft Requirements or Rogers Board and the Army Tactical Mobility Requirements or Howze Board.[124] The recommendations and exercises that resulted from these studies were integral to creating the required force structure for the airmobility concept. Following the Howze board, Secretary of Defense Robert McNamara authorized the creation of the 11th Air Assault Division (test).[125] Throughout the 1964 test period, 11th Air Assault Division validated the concept of airmobility. In 1965, the 11th was re-flagged as the 1st Air Cavalry Division, after which it deployed to Vietnam as the first American divisional level unit.[126]

From1962 to 1970, Army aviation end strength grew from 6,000 to 12,000 aircraft, with the final balance of forces heavily favoring rotary wing aircraft to the tune

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[123]United States Army Aviation School, *Common Subjects and Reference Data for Army Aviation in the Field Army* (Ft. Rucker, AL: 1968), Howard Burbank Collection, http://www.virtualarchive.vietnam.ttu.edu (accessed 24 January 2013), 15.

[124]Williams, *A History of Army Aviation*, 90.

[125]Ibid., 107.

[126]Stanton, *Vietnam Order of Battle*, 71.

of 80 percent.[127] Organic aircraft became a permanent fixture in the Army enabling revolutionary logistical and maneuver self-sufficiency, independent of the Air Force. Vietnam was indeed a helicopter war. The next section examines Vietnam's operational environment with a focus on mission, troop levels, threat tactics, geography, and weather with analysis regarding effects on rotary wing operations.

Vietnam's Operational Environment

The missions of U.S. forces in Vietnam included the elimination of revolutionary sentiment to pacify the population, to maintain a secure non-communist ally in Southeast Asia, and to prevent the spread of communism.[128] From the initial deployment of combat advisors in 1961 to the end of President Richard Nixon's Vietnamization program, the United States mission remained largely unchanged with notable differences in force size and methods applied.

Initial American involvement remained small with a combat advisory role until the Gulf of Tonkin incident, after which American troop levels increased steadily 23,000 to a high of 541,000 in 1969.[129] In addition to American troops, the Army of the Republic of Vietnam, Regional Forces, and Popular Forces (RF/PF) troops grew from 500,000 in 1964 to 1,048,000 troops at peak strength in 1972.[130] Whether it was Army of the

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[127]Ibid., 96.

[128]Headquarters, South Vietnamese Liberation Army, *PLAF Assessment and Strategy: 1965*, Douglas Pike Collection, http://www.virtualarchive.vietnam.ttu.edu, (accessed 20 April 2013), 6.

[129]Patti, *Why Vietnam?: Prelude to America's Albatross*, 470.

[130]Stanton, *Vietnam Order of Battle*, 333.

Republic of Vietnam or American troops in the lead, the goal was to pacify and eliminate the threats posed by the VC and the PAVN.

The primary threat prior to 1965 came from locally recruited Viet Cong (VC) insurgents. From 1965 to 1966, PAVN forces were the main threat as they attempted to invade South Vietnam with multiple regiments in order to defeat allied forces before America made a more significant commitment.[131] Following the setback in the Ia Drang Valley, the conventional PAVN threat receded from early 1966 until the Tet Offensive, replaced by small VC and PAVN guerilla units. The Tet Offensive signaled a phase back to more conventional tactics, perpetrated by both VC and PAVN elements, but this attempt met defeat. From 1968 until 1971, guerilla tactics were again the preferred method of threat forces engagement in Vietnam.

Viet Cong military units included militia, combat, and combat support forces. Militia forces included guerilla, self-defense, and secret self-defense units. The guerrillas were the most important militia unit because they were the base enemy unit for irregular warfare. Guerilla units were primarily responsible for harassment, assassination, terrorism, and sabotage. The self-defense and special self-defense units were part time soldiers responsible for local security and early warning. Combat forces included local force units, main force units, and PAVN infiltrators. PAVN infiltrators and VC main

[131]Headquarters, South Vietnamese Liberation Army, *PLAF Assessment and Strategy: 1965*, 19.

force units received the best training and equipment.[132] Combat support forces included the headquarters and support staffs needed to train, equip, field, and supply the VC.

As of 1963, VC strength estimates marked 20,000 combat and combat support forces with as many as 100,000 militia troops.[133] The most common unit of irregular forces encountered on the battlefield was the platoon or squad. VC battalion-sized operations took place, but if confronted with superior force, these units usually faded away. PAVN infiltrators armed with superior equipment bolstered VC main force units throughout the war. Additionally, regular PAVN units up to and including division strength participated in combat against American and ARVN forces. The synergy exercised between VC guerrillas and PAVN regular forces represented a credible and difficult enemy.

The missions of the VC included gaining the support of the people, conduct of attacks against enemy rear areas, conduct of attacks against lines of communication, attrition of threat forces, and retention of the initiative. Ultimately, the VC wanted to reunify North and South Vietnam. Viet Cong tactics largely fell into categories including ambush, harassment, raid, and infiltration. A U.S. manual from 1966 describes VC tactics: "when the enemy advances, withdraw; when he defends, harass; when he is tired, attack; when he withdraws, pursue."[134] This also describes their response to American

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[132]U.S. Department of Defense, *Handbook for U.S. Forces in Vietnam* (Vietnam: 1966), Theodore R. Kramer Collection, http://www.virtualarchive.vietnam.ttu.edu (accessed 24 January 2013), 9.

[133]Joint Evaluation Group, *Vietnam Operational Evaluation of Armed Helicopters* (Vietnam: 1963), Annex C, 3.

[134]U.S. Department of Defense, *Handbook for U.S. Forces in Vietnam*, 14.

helicopters--hide. Only when cornered or defending a base camp would the VC and PAVN stand and fight if confronted by helicopter gunships and airmobile troops.

Besides using small arms and crew-served weapons fire against rotary wing aviation, the VC and NVA would set ambushes on potential LZs using small arms, mortars, bamboo stakes and mines and command-explosives.[135] In the later years of the war, PAVN infiltrators introduced 12.7 mm and higher caliber weapons to engage helicopters. A captured NVA instructional pamphlet dated from 1962 states, "widespread efforts must be directed to combating heli-borne landings and shooting at helicopters."[136] The pamphlet also listed the NVA's perceived five advantages of helicopter borne forces which included complete mobility, secrecy enabling surprise strikes, landings deep in rear areas, and a means of destroying forces prior to concentration (spoiling attacks).[137] The NVA recognized the full value of helicopter forces early in the conflict.

The terrain of South Vietnam was also a formidable adversary. South Vietnam's terrain includes the Mekong Delta, the Mekong Plateau, the Chaine Annamitique Mountains, and the coastal plain. The Mekong Delta occupies the southern portion of the country and is a flat plain dominated by the Mekong River and its dense network of tributaries, marshes, and swamps. Trafficability of the delta is difficult, particularly during the flooding during the wet season. The Mekong Plateau area is northeast of the delta and consists of numerous plateaus and small hills with elevations lower than 1,000

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[135]Joint Evaluation Group, *Vietnam Operational Evaluation of Armed Helicopters*, Annex C, 4.

[136]Tolson, *Vietnam Studies*, 27.

[137]Joint Evaluation Group, *Vietnam Operational Evaluation of Armed Helicopters*, Annex C, 4.

feet. The Annamitique Mountains cover the area north of the Mekong Plateau and are 35 percent of the total land area of South Vietnam. Elevations in this area range from 3,000 to 7,000 feet with thick vegetation including deciduous and evergreen forests. Limited roads and seasonal flooding make ground travel in the delta and mountain areas difficult.[138] The difficult terrain made the helicopter valuable since no other platform could traverse Vietnam's varied terrain, exposing and assaulting airmobile troops to address the numerous threats posed by PAVN and VC forces.

South Vietnam's borders included an 800-mile western border with Cambodia and Laos, the northern border with North Vietnam along the seventeenth parallel, and the country's eastern border along the South China Sea. South Vietnam was a long and slender country 620 miles long and 120 miles across at the widest point.[139] The shape of Vietnam along with its unique terrain and lack of roads made border security extremely difficult. The Ho Chi Minh trail ran through Cambodia and Laos. The PAVN used the trail to infiltrate supplies and troops along the length of South Vietnam. Allied forces attempted interdiction of the Ho Chi Minh trail, but the efforts were small and mostly ineffectual until 1972.

The weather of South Vietnam challenged U.S. forces with the unique nature of the monsoon. Monsoons dominated South Vietnam's climate. The southwest monsoon provided the wet season from May to October. The northeast monsoon provided the dry season from November to May. Thunderstorms and wet weather with poor visibility and

[138]Ibid., 2.

[139]Boyne, *How the Helicopter Changed Modern Warfare*, 120.

low ceilings challenged airmobile operations for aviation and ground forces.[140] Despite the weather, the helicopter was the best platform available for maneuver in the difficult terrain of Vietnam.

The civilian population of South Vietnam consisted of fourteen and one-half million residents as of 1965.[141] In order of density, the South Vietnamese population lived in the coastal plain, Mekong Plateau, Mekong Delta, and mountain areas. Major urban areas of South Vietnam included Siagon, Nha Trang, Da Nang, and Hue, all located on the coastal plain. Control of these urban areas was a struggle throughout the war. For helicopters, urban areas were the most difficult areas to operate.

United States Rotary Wing Organizational Structure in Vietnam

The American military used multiple rotary wing aircraft types during the Vietnam conflict. The most common types of army helicopters included the CH-21 Shawnee, CH-37 Mojave, CH-47 Chinook, the CH-54 Tarhe "Flying Crane," OH-6 Cayuse, OH-13 Sioux, OH-58 Kiowa, and the AH-1 Cobra. The Marines used the CH-34 Choctaw early on, but progressed to the UH-1 by 1968. The air force used the HH-43: Huskie," the HH-53 "Jolly Green Giant," and the UH-1. The Navy's mainstay helicopter was the SH-3 Sea King. Air Force and Navy aircraft focused predominantly on downed pilot search and rescue missions throughout the war. At peak levels, the U.S. Army operated over 4000 helicopters, the Vietnamese Air Force operated 600, the Marines 340,

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[140]Joint Evaluation Group, *Vietnam Operational Evaluation of Armed Helicopters*, Annex C, 4.

[141]Army Concept Team in Vietnam, *Armed Helicopter Reconnaissance and Area Surveillance* (Vietnam: 1965), 6.

the Navy 45, and the Air Force 60.[142] Vietnamese Air Force and Marine helicopters operated in much the same way as U.S. Army helicopters, but under a more centralized control system with the squadron as the basic unit of operations. Specifically, the Marines operated both UH-1 and AH-1 gunships in congruence with the Army, but they were less reliant on them due to the availability of Marine fixed-wing CAS.

With the massive buildup of helicopter forces starting in 1961, U.S. and ARVN forces began to reap the benefits of airmobility.[143] By 1965, the U.S. Army deployed fifty aviation companies and cavalry troops to South Vietnam, a number that ballooned to 142 by 1968.[144] With rotary wing aircraft, U.S. and ARVN forces gained tactical mobility advantages that enemy forces could not match. The first helicopter borne combat assault in Vietnam took place on 23 December 1961, a mere twelve days after the arrival of the first thirty-three American helicopters in country. The action transported over 1,000 Army of the Republic of Vietnam (ARVN) paratroopers to assault the enemy and underlined the tactical advantages enjoyed by helicopter-supported troops.[145] Between December 1961 and April 1962, the U.S. deployed four Army helicopter companies outfitted with CH-21 Shawnee and OH-13 Sioux helicopters and the Marines deployed a

[142]Boyne, *How the Helicopter Changed Modern Warfare,* 146.

[143]Tolson, *Vietnam Studies,* 36.

[144]Shelby L. Stanton, *The Rise and Fall of an American Army* (Novato, CA: Presidio Press, 1985), 89.

[145]McGowen, *Weapons and* Warfare, 98.

helicopter squadron with H-34s. In September of 1962, the deployment of fifteen UH-1B armed helicopters bolstered efforts by providing gunship escorts for the CH-21s.[146]

The arrival of the UH-1B Iroquois heralded the transition of rotary wing aircraft from piston-driven engines to turbine power. The UH-1B was able to carry eleven combat loaded troops, was smaller, more maneuverable, and easier to maintain than the CH-21.[147] Additionally, the UH-1 was less vulnerable to enemy fire and had two wide-open side doors mounting defensive weapons with a wide field of fire. The early use of the Iroquois proved so successful that the Army changed the organization of its aviation companies to all UH-1 aircraft with one eight-helicopter gunship platoon and two eight-helicopter transport platoons.[148] This twenty-four helicopter aviation company structure was dubbed the "airmobile" configuration and served as the building block of aviation support in Vietnam.

If the aviation companies were the building blocks of Army aviation, the higher organizational structures, which included both ground and aviation commanders, provided the framework. Higher units initially included companies, aviation battalions/squadrons, and the aviation group. Aviation was assigned to Infantry, Airmobile/Air Cavalry, Airborne, and Mechanized/Armor divisions. In addition to divisional aviation units, non-divisional aviation units were assigned to the corps and field army levels. These non-divisional units included specialized helicopters such as the

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[146]Tolson, *Vietnam Studies*, 33.

[147]Ibid., 36.

[148]Ibid., 33.

heavy-lift CH-54. During the years prior to 1966, aviation companies and groups were the main interfaces with ground units.

The aviation parent organizations provided the training, standardization, and maintenance of aviation units. The ground unit command structure established the division and brigade relationships, whereby ground commanders made operational employment decisions. The dual command relationship where ground commanders governed helicopter employment decisions and aviation leaders presided over administrative/safety considerations was a crucial link to Army aviation's responsiveness.

As the war progressed, the Army attempted to extend the advantages of airmobility to as many units as possible by increasing the number of helicopters. Without adequate aviation command structure, the aviation companies, battalions, and groups had difficulty handling the demand for support. Additionally, ground units often competed for the available aviation assets, and without higher-level aviation command to enforce safety standards, helicopter units were chronically overused. The aviation command structure had to grow to provide a smoother interface between ground and aviation units.[149]

The first aviation brigade formed 1 March 1966 in response to the influx of aircraft. The First Aviation Brigade began as a provisional unit, commanded by Brigadier General Seneff. Within two years of its inception, the brigade swelled in size to 25,000 soldiers and was responsible for the control of four aviation groups and 4,230 aircraft.[150]

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[149]Tolson, *Vietnam Studies*, 102.

[150]Stanton, *The Rise and Fall of an American Army*, 92.

The brigade had 814 utility helicopters, 403 helicopter gunships, 99 cargo helicopters, and 92 scout helicopters.[151]

With the advent of the aviation brigade, the Army standardized command relationships so that every infantry brigade had access to organic aviation support. The First Aviation Brigade assigned one assault helicopter company to every brigade. Divisions had control of an aviation battalion while aviation groups worked for corps level commands.[152] Standardized command relationships meant that aviation units developed habitual relationships and worked according to standard operating procedures. These efforts shortened the planning and training required prior to the execution of helicopter operations.

Aviation brigade control was integral to the efficiency of aviation units. Centralized administration of aviation training, standardization, and maintenance along with the formalization of command relationships fixed the problems of the Reorganization Objective Army Division structure.[153] By removing administrative control of aviation units from infantry headquarters untrained in their operations, the aviation brigade increased the mobility and killing power of American forces. As measures of performance, the 1st Aviation Brigade's 1967 totals included 2.9 million sorties, 1.2 million hours flown, and claims to 10,556 Viet Cong killed.[154] From 1966

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[151]Boyne, *How the Helicopter Changed Modern Warfare*, 146.

[152]Tolson, *Vietnam Studies*, 103.

[153]Simon Dunstan, *Vietnam Choppers: Helicopters in Battle 1950-1975* (Oxford, UK: Osprey, 1988), 37.

[154]Boyne, *How the Helicopter Changed Modern Warfare*, 146.

until 1972, the First Aviation Brigade controlled all Army aircraft in Vietnam not assigned to an Air Cavalry Division. To appreciate the application of Army aviation organization and to understand the Army's commitment to airmobility, one must also consider the air cavalry division.

The air cavalry division concept included a blend of infantry, artillery, and rotary wing assets applied in a revolutionary formation fielding 434 aircraft. The aviation component had an organic aviation group, an air cavalry squadron, and a divisional aerial artillery battalion.[155] The division's air cavalry squadron, the 1st Squadron, 9th Cavalry, was one most storied units of the Vietnam War. Shortly after the squadron's arrival in August of 1966, two scout helicopters identified and fixed a group of PAVN Soldiers. The scout helicopters vectored one of the squadron's rifle platoons into the area to air assault against the pinned-down enemy. In the resulting engagement, one cavalry trooper died vice sixteen enemy dead and nine wounded who were taken prisoner.[156] This type of lopsided victory typified airmobile operations.

The airmobile division structure is worth examining in detail because it demonstrates a divisional size unit with helicopters integrated at every level. Deployed to Vietnam in 1965, the 1st Cavalry Division possessed two-thirds as many helicopters as the peak strength of rotary wing forces during both French and Soviet efforts in Algeria and Afghanistan respectively. The 1st Cavalry Division's deployment to Vietnam signified America's resolve to provide their best forces to protect the Vietnamese from

[155]Headquarters, Department of the Army, DA Pam 360-216, *The Airmobile Division* (Washington, DC: 1965), Paul Kasper Collection, http://www.virtual archive.vietnam.ttu.edu (accessed 24 January 2013), 1.

[156]Stanton, *The Rise and Fall of an American Army*, 91.

communist aggression. The 1st Cavalry Division's 16 November 1965 victory at LZ X-ray during with its lopsided fifteen to one kill ratio served as the attrition strategy's proof of concept.[157] Only two air cavalry divisions existed during the war, the 1st Cavalry Division arriving in 1965 and the 101st Cavalry Division (airmobile) created in country during 1968.[158] These units fought at the forefront of hostilities throughout the war.[159]

The deployment and use of helicopters in large numbers was a natural response to the challenges presented by South Vietnam's terrain. Cognizant of the shortcomings that plagued French forces in Indochina during the 1950s, U.S. forces sought the integration of helicopters to provide a technological advantage in mobility and firepower.[160] As a platform uniquely suited to exploitation and pursuit, the helicopter negated some advantages of guerilla tactics along with the enemy's terrain and intelligence advantages. No other platform could traverse Vietnam's varied terrain, exposing and allowing the mobility for reactions to the numerous and unpredictable threats posed by PAVN and VC forces. This tactical dominance was also the weakness of the helicopter, because it reinforced the American desire to win by attrition. The lopsided battlefield successes enjoyed by airmobile units became the means that drove the ends. Instead of a balanced political and military strategy focused on legitimizing the Vietnamese government,

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[157]John A. Cash, John Albright, and Allan W. Sandstrum, *Seven Firefights In Vietnam* (Washington, DC: Government Printing Office, 1984), http://www.history .army.mil/books/Vietnam/7-ff/Ch1.htm, (accessed 28 May 2013), 40.

[158]Boyne, *How the Helicopter Changed Modern Warfare*, 145.

[159]Tolson, *Vietnam Studies*, 193.

[160]Gregory A. Daddis, *No Sure Victory: Measuring U.S. Army Effectiveness and Progress in the Vietnam War* (Oxford: NY, Oxford University Press, 2011), 76.

isolation of population from insurgents, and population control, U.S. forces decided to kill their way to victory.[161]

United States Use of Helicopters in the Utility and Assault Roles

> By use of helicopters, well supported by artillery and fighters, commanders are able to achieve surprise shock action, to move sizeable forces quickly over obstacles or long distances, and to mass forces or reinforce a position quickly with fresh troops ready for combat.[162]

With the increase of U.S. commitment beginning after the 1964 Gulf of Tonkin resolution, American troop levels rose steadily to half a million troops by 1968. While 500,000 troops may seem significant, Vietnam's restrictive terrain, poor road system, a veteran enemy familiar with local conditions, and a large support structure, the actual strength of U.S. combat forces was less significant. The helicopter's mobility helped address the combat power limits imposed by America's large support structure. Some cogent examples of tactical innovation that leveraged the superior mobility of the U.S. Army included the airmobile/air assault, helicopter borne reinforcement, eagle flights, and combat reconnaissance.[163]

The 1966 handbook for U.S. Forces in Vietnam characterizes an airmobile assault as having pre-planned LZs, an objective, a reserve element, and the coordinated use of fire support.[164] An airmobile assault included a helicopter borne C2 element, assault

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[161]Lewis Sorely, *Westmoreland: The General Who Lost Vietnam* (New York: Houghton Mifflin Harcourt Publishing Company, 2011), 91.

[162]U.S. Department of Defense, *Handbook for U.S. Forces in Vietnam*, 79.

[163]Ibid.

[164]Ibid., 81.

helicopters sufficient to lift the first wave, medium helicopters to move artillery if required, an escort element including armed helicopters and fighter aircraft, and a forward air controller/liaison. The airmobile assault force also required multiple elements on call including medical evacuation helicopters, helicopters for downed aircraft recovery, and an artillery-spotting airplane.[165] The key elements to successful airmobile assaults included pre-planning, training, and organization that included sufficient helicopters.

Integrated within the concept of the airmobile assault was the idea of helicopter borne reinforcement. By design, airmobile assaults required reinforcement due to LZ size limitations and limits on the number and carrying capacity of helicopters. These factors limited the number of troops a helicopter force could insert at one time, thus requiring the need for successive lifts to reinforce the initial landing effort. Additionally, the application of helicopter borne reinforcements was not limited to airmobile assault. Any ground unit could seek reinforcement using aviation. Considering the terrain limitations in Vietnam, it was natural that ground commanders often resorted to helicopters for reinforcement, as other venues took too much time or were too risky. When U.S. forces gained enemy contact, the insertion of fresh troops on the enemy flank, in enemy rear areas, or to pursue a fleeting target was often the key to success. Conceptually, application of timely reinforcements and pursuit of the enemy was the basis for the formation of eagle flights.[166]

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[165]Ibid., 88.

[166]Ibid., 94.

An “Eagle Flight” was “a force capable of searching out and pursuing its prey, attacking it quickly and violently, and withdrawing to seek other prey.”[167] Tactical employment of this force included tasks such as locate, destroy, pursuit, and the vertical envelopment of enemy units. Eagle Flights typically included a company-sized element with seven UH-1Ds to carry troops, five UH-1Bs for escort and reconnaissance, and one UH-1D for medical evacuation. Eagle Flights also had habitually-assigned infantry units trained in the conduct of air assaults. The major differences between Eagle Flights and airmobile assaults included a lack of pre-planned LZs and the ability to move the entire self-contained assault force in a single lift. The reduced planning threshold and habitual working relationship between aviation and infantry increased flexibility and shortened reaction time. An Eagle Flight’s ability to spring into action at a moment’s notice was especially valuable against the VC because it increased the chances of successful pursuit, thereby reducing enemy access to sanctuary. By 1964, most aviation companies in Vietnam had at least one Eagle Flight organized and on standby at all times.[168] Integrated into the Eagle Flight concept were reconnaissance, security, and attack helicopter missions. Eagle Flight actions served as a pre-cursor to what air cavalry units did on a larger scale, finding and assaulting viable targets. Key to this effort was finding the enemy, and for this effort, aviation companies formed combat reconnaissance flights to gather information.

Combat reconnaissance was an airmobile capability focused on finding the enemy and gathering intelligence. The organization of combat reconnaissance flights was similar

[167]Ibid., 92.

[168]Tolson, *Vietnam Studies*, 39.

to a ground patrol, with twenty to twenty-four men and the requisite helicopters and gunship support to move them about the battlefield and deliver them safely to reconnaissance objectives.[169] The patrol did not equip itself for sustained operations and ideally spent less than fifteen minutes on the ground. Successive insertions were a hallmark of combat reconnaissance patrols. Ground forces used airmobile combat reconnaissance to find the enemy, to establish intelligence for impending air assaults, to keep the enemy off balance, and to remind the VC that no place was safe from attack. Combat reconnaissance missions were likely the inspiration for future reconnaissance in force operations and the often-cited "search and destroy" missions that gained constant mention in the press after 1965.

Nowhere in the 1966 handbook for U.S. forces does it mention how aviation operations coincide with the political side of expeditionary COIN operations.[170] Aviation tactical employment seemed solely focused on kinetic operations aimed at attriting the enemy. Helicopters conducted many missions in support of pacification efforts, but these missions were not aviation's focus and little to no doctrine existed to inform commanders regarding helicopter applications for operations other than finding and killing the enemy. Pacification support missions fell under the category of administrative missions, which did not exceed 20 percent of total missions flown in Vietnam, meaning the sorties flown for "support of civil activities" missions was considerably less.[171] Record keeping

[169]U.S. Department of Defense, *Handbook for U.S. Forces in Vietnam*, 95.

[170]Ibid., 1-169.

[171]Simon Dunston, *Vietnam Choppers: Helicopters in battle 1950-1975* (Oxford, UK: Oxford Publishing, 2003), 59.

regarding air assault and reconnaissance-in-force missions received all the attention, as these were key enablers to ground force search and destroy operations.

As one of the defining missions of the war, search and destroy operations were conceived of and executed with helicopters as a predominant means and the air assault as an important way. As the means and ways of search and destroy operations, helicopters and air assaults were integral to the attritional strategy that defined the war until 1968. General Westmoreland's vision of an attritional strategy was likely impossible in Vietnam without the mobility provided by assault helicopters. Throughout the war, the U.S. Army flew 7,547 assault sorties out of 36,145 total helicopter sorties, 20 percent of the total.[172] This percentage does not account for the attack, cargo, and personnel movement sorties that supported assault forces following their insertion. These numbers reinforce the conclusion that American commanders focused heavily on military operations, likely at the expense of pacification and isolation efforts.

The focus on air assaults in support of attritional outcomes was self-reinforcing. Most air assaults temporarily defeated and dispersed enemy formations at the tactical level. With enough tactical defeats, U.S. forces hoped they could attain operational success and eventual strategic victory. This was the essence of attrition war. Air assaults were tactically successful by most measures, but they were not decisive at the operational and strategic levels.[173] U.S. forces did not kill enough because PAVN forces were able to recoup their losses. VC guerrillas and PAVN regulars that dispersed following defeat

[172]Stanton, *Vietnam Order of Battle*, 347.

[173]BACM Research, *Vietnam After Action Reports*, 2009, books.google.com (accessed 25 April 2013), 190-201. Charts depict tactical success according to conventional attrition strategy.

retreated to sanctuary, where they rebuilt to fight another day. Without pursuit or isolation, allied forces squandered their mobility and firepower advantages by constantly reacting to enemy attacks launched from and supplied by sanctuaries.[174] The helicopter enabled tactical success blinded U.S. forces to operational and strategic weaknesses until it was too late. By the time U.S. forces tried to adjust away from the attrition strategy, Americans wanted the war over. Over-militarization with airmobile tactics driving the strategy of attrition contributed to America's departure and South Vietnam's eventual loss.

United States Use of Helicopters in the Reconnaissance and Attack Roles

As early as 1943, Army aviation theorists postulated that in comparison to fixed wing aircraft, the helicopters' slow speed and unique maneuverability provided observation advantages in the CAS and reconnaissance roles.[175] Helicopters were better at finding the enemy, identifying friendly troops, and delivering accurate fire. The Air Force demonstrated a post-World War II preference for procurement of supersonic aircraft purpose built for air superiority and interdiction in a nuclear environment. The equipment limitations and an unwillingness to conduct CAS forced the Army to seek its own air support options in the helicopter. The advantages of the helicopter combined with the Air Force's neglect of CAS fed the Army's desire to regain organic aviation support. Resolution came during the early stages of the Vietnam Conflict when the U.S Army deployed both reconnaissance and gunship helicopters.

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[174]Bruscino, Occasional Paper #17, 37.

[175]Gregory, *Anything a Horse Can Do; The Story of the Helicopter*, 242.

The armed helicopter first saw use with the French in Algeria. U.S. Army aviators, cognizant of Air Force shortcomings in CAS, paid attention to what the French were doing and began armed testing of American helicopters. Using French efforts as inspiration, Colonel Jay Vanderpool strapped machine guns and rockets on an OH-13 at Ft. Rucker, Alabama in 1956.[176] These early tests set the conditions for efforts to arm helicopters like the UH-1.

American combat testing of gunship helicopters coincided with the deployment of the first turbine powered UH-1A helicopters to Vietnam in September of 1962. The first UH-1A helicopters served as armed escorts for the CH-21 transports. Initially, the Army armed fifteen UH-1As with locally fabricated weapons including two .30 caliber machine guns and sixteen 2.75-inch rockets. The Army augmented the test effort in November of 1962 adding eleven UH-1B gunships armed with 2.75-inch rockets and four factory installed, pivot mounted, M-60 machine guns.[177] These helicopters were part of an Army test to study the effectiveness of armed helicopters by the Army Concept Team. The Army Concept Team determined that un-escorted CH-21 transport helicopters took damage at a rate of .011 per flying hour compared to escorted formations that took damage at a .0074 rate.[178] The helicopter gunship, its speed matching the transports, was better suited as an escort aircraft than fixed wing aircraft. During the period of evaluation from October 1962 to March 1963, the escort company flew 1,779 hours, lost no aircraft,

[176]Tolson, *Vietnam Studies*, 6.

[177]Ibid., 30.

[178]Ibid.

and claimed 246 VC kills.[179] With a measurable reduction in effective enemy fire against transport helicopters, the armed helicopter had proven itself. The Army Concept Team Study reinforced notions that helicopters and airmobility could be the solution to many of South Vietnam's problems.

The armed helicopter became commonplace in 1963, when the army applied a standardized company structure which included eight of twenty-four UH-1 aircraft as gunships.[180] This aerial weapons platoon concept evolved from a ratio of eight gunships per twelve transports into an aerial weapons company with twelve gunships per twenty transports in a 32 aircraft battalion.[181] In either configuration, helicopter gunships made up approximately one-third of the serving helicopters. The gunship had become an integral part of Army aviation and its future success would greatly pad the reported numbers of enemy dead, further feeding the U.S. forces attrition preference. With so many gunships, aviation invariably associated success with the numbers of enemy killed. It is questionable whether the attritional successes achieved by helicopters equaled victory in South Vietnam, but Army Aviation was enamored with gunships.

The Army also experimented with other platforms and formations to fulfill the gunship mission. One alternate formation employed was the Air Cavalry Division's aerial artillery battalion. This unit included thirty-nine UH-1Bs armed with guns, missiles, and rockets. It is unlikely that aerial artillery won South Vietnamese hearts and minds, but

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[179]Ibid.

[180]Interview with Stanley F. Cherrie, Brigadier General, U.S. Army (ret.)

[181]United States Army Aviation School, *Common Subjects and Reference Data for Army Aviation in the Field Army*, 82.

these units did kill many enemy soldiers. As an alternate platform, the Army experimented with the CH-47 Chinook in the ground attack role. Initially, units employed the Chinook as a bomber, dropping napalm or riot control agents on VC tunnel complexes. Later, the 1st Cavalry Division employed a few of their Chinooks as "Go-Go birds," armed with twenty millimeter Gatling cannons, forty-millimeter grenade launchers, fifty caliber machine guns, and rockets.[182] Of the three "Go-Go birds" that flew, the enemy downed two, prompting an end to the program. The Chinook's superior value in the transport role, limited availability, and vulnerability to ground fire ensured that it would not become the Army's ground attack platform. The efforts to find a better ground attack platform underline the military's preference for casualty producing operations. The helicopter's direct fire weapons potential reinforced attritional success on the battlefield thereby ensuring that ground forces sought ever more destructive platforms.

The Army and Marines filled this need with the deployment of the AH-1 Cobra in September of 1967 as the world's first purpose-built ground attack helicopter.[183] The AH-1 could mount multiple weapons configurations with the most common including a 20-mm Gatling gun in the nose and seventy-six rockets under the wings. This gave a single aircraft potential firepower exceeding that of an entire battalion of 105-mm howitzers.[184] The AH-1 began to replace UH-1 gunships in air cavalry and aerial rocket artillery formations where it leveraged advantages including superior weapons carrying

[182]Tolson, *Vietnam Studies*, 142.

[183]Ibid., 144.

[184]McGowen, *Weapons and Warfare*, 108.

ability, fire control, and survivability. The AH-1 scored the first helicopter kills of North Vietnamese tanks at the Battle of Lam Son in February 1971. During the engagement, the AH-1 destroyed or immobilized fourteen tanks, mostly with 2.75-inch rockets.[185] In 1972, during the PAVN Easter Offensive, the AH-1 again made helicopter history firing 102 TOW and SS-11 missiles, hitting fifty-three tanks. The AH-1 was clearly a superior gunship, but the airframe suffered in its observation abilities, hence the need for pairing it with a capable reconnaissance helicopter. If Americans could just find the enemy, superior firepower could kill them.

Considering reconnaissance, the helicopter was the best scouting platform available. With the ability to maneuver in three-dimensions, ability to hover, and a reduced reliance on airfields as compared to fixed wing aircraft, rotary wing scouts were indispensable at finding VC and PAVN formations. A 313-day study conducted by the 9th Infantry Division in 1968 found that brigade-sized units without helicopter support averaged one significant enemy contact every five days resulting in 1.6 VC kills per day.[186] When the same unit had control of an air cavalry troop and an assault helicopter company, the number of significant enemy contacts increased to every other day and resulted in 13.6 VC kills per day.[187] In essence, helicopter reconnaissance doubled the discovery rate of VC units while enabling an 850 percent increase in the rate of VC per day killed. The study concluded that the 9th Division should have an additional assault helicopter company and air cavalry troop assigned to it. The reasoning was that U.S.

[185]Tolson, *Vietnam Studies*, 249.

[186]Ibid., 181.

[187]Ibid.

forces equipped with more helicopters could find and kill the enemy more easily. The nature of the study itself is revealing because of its emphasis on kill rates as the greatest measure of success. Measuring kill rates was congruent with the chosen strategy of attrition. The study also revealed an American weakness in that poor intelligence required a reliance on scout aircraft over human intelligence to find the enemy. For better or worse, rotary wing reconnaissance aircraft were one of the most effective choices when it came to locating enemy formations.

In order of chronological use, the OH-13 Sioux, OH-6 Cayuse, and the OH-58 Kiowa were the primary rotary wing reconnaissance aircraft. The OH-6, also known as the "LOACH," was far superior to the OH-13 due to its inclusion of a turbine-powered engine. The OH-6's bubble cockpit, small profile, agility, survivability, and low cost per unit ($29,415) made it one of the best scout aircraft ever fielded.[188] The Loach mounted a 7.62-mm minigun and the crew of two often carried one M60 machine gun. The Loach was responsible for finding and initiating many engagements with the VC. The Army fielded the OH-6 in conjunction with the AH-1 in 1967, and the two aircraft often worked together to find and destroy VC and PAVN troops.[189]

Find, fix, and destroy was a central theme in the employment of air cavalry units, arguably the most effective formations of the Vietnam War. Find, fix, and destroy was another way to articulate the search and destroy mission, which was a tactic central to General Westmoreland's strategy of attrition. With at least one air cavalry troop assigned to every corps headquarters, these units found primacy in Vietnam by being one of the

[188]Boyne, *How the Helicopter Changed Modern Warfare*, 141.

[189]McGowen, *Weapons and Warfare*, 108.

few units well suited to the task of gaining and maintaining contact with VC and PAVN forces. The air cavalry divisions operated with even greater ability, as each possessed an organic air cavalry squadron. In fact, air cavalry divisions were the unit type most associated with the search and destroy mission. Hallmark operations such as the Battle of Ia Drang Valley proved helicopter-borne forces could find and defeat large enemy formations in support of the attrition strategy.[190]

The Battle of Ia Drang suffered the same shortcoming as engagements throughout the Vietnam conflict, which was imprecise intelligence regarding the location, size, and disposition of enemy units. When the 1st Battalion, 7th Cavalry regiment landed at LZ X-ray, they expected to face the remnants of one regiment.[191] Instead, they fought an entire PAVN division. To address the shortcoming of poor intelligence, the Army employed reconnaissance in the form of air cavalry troops and squadrons. With a robust ability to find and engage enemy formations, the air cavalry were units of choice in South Vietnam. The 1st Squadron, 9th Cavalry was at the forefront of almost every major engagement in the war, providing crucial intelligence to determine enemy positions, strengths, and directions of travel.[192] U.S. Army commanders including Lieutenant General John Tolson estimated that their air cavalry units initiated 90 percent of their engagements with the VC and PAVN forces.[193]

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[190]Sorely, *Westmoreland*, 94.

[191]John A. Cash, *Fight at Ia Drang*, http://www.history.army.mil/books/Vietnam/7-ff/Ch1.htm (accessed 30 April 2013), 4.

[192]Boyne, *How the Helicopter Changed Modern Warfare*, 138.

[193]McGowen, *Weapons and Warfare*, 108.

Attack and reconnaissance aircraft were crucial to the attrition war, but they were a tertiary concern to the overall fight in South Vietnam. At best, attack and reconnaissance helicopters provided a measure of isolation by either deterring enemy movement or finding and engaging enemy formations away from urban areas. At worst, attack and reconnaissance helicopters were a distraction, enabling U.S. forces to focus on destruction of the enemy over pacification efforts. To address the problems of difficult terrain and poor human intelligence, allied forces used their ample supply of helicopters to address the shortcomings. The availability of so many reconnaissance aircraft allowed allied intelligence to concentrate on signals intelligence and photo-reconnaissance. If human intelligence efforts were stronger, then U.S. reconnaissance helicopters may not have had to discover enemy locations. The helicopter's primacy in locating enemy movements signifies the allied lack of initiative, because without corroborating human intelligence, U.S. forces were often doomed to react to enemy moves. Even the helicopter could not see everything in the jungle.

Helicopter gunships padded the body count reporting, which reinforced the U.S. military's perceptions of attritional success. Use of high enemy body counts as a primary measure of success lulled allied forces into a false sense of security regarding their imminent victory. Even when one considers that attrition resulted in some success after 1968, without a matching political strategy aimed at effective isolation and RVN governmental legitimacy, the success of attrition was fleeting. The primacy of reconnaissance and attack helicopters demonstrates the U.S. preference for military over political solutions. Reconnaissance and attack helicopters were strategically insignificant.

Tactical Case Study: Air Assault at Quang Tri City

One of the strongest examples of American airmobile tactics in practice was the battle for Quang Tri City during the 1968 Tet offensive. The enemy assault began during the early morning hours of 31 January with attacks from east of the city. Enemy elements assaulting the city consisted of the PAVN K6 and K4 battalions, the VC 808th and 814th main force battalions, and the 10th VC sapper battalion.[194] The early stages of the battle saw elements of the 10th Sapper, K4, K6, and 814th battalions enter the city and engage ARVN forces. The 808th remained north of the city to block ARVN relief units. As daylight broke, ARVN mechanized units counterattacked from south of the city but were stopped by dug-in PAVN soldiers from the K6 battalion.[195] By midday, ARVN efforts to relieve the city were frustrated. Enemy forces had made tenuous progress within the city after house-to-house fighting, but the city's famed citadel was still in ARVN hands after a failed assault by the 814th VC battalion. With the city surrounded and ARVN relief unlikely for several days, the decision was made to introduce the American 1st Cavalry to the battle.[196]

The 1st Brigade, 1st Cavalry division, which had recently entered the Quang Tri province was stationed just to the south of Quang Tri City at Camp Evans. The 1st Brigade had recently moved to I Corps' tactical area with orders to conduct Operation Jeb Stuart that would reinforce Marine interdiction efforts aimed at stopping PAVN

[194]Erik Villard, *The 1968 Tet Offensive Battles of Quang Tri City and Hue* (Ft. McNair, DC: U.S. Army Center for Military History, 2008), www.history.army.mil /html/books/vietnam/tet_battles/tet.pdf (accessed 25 May 2013), 17.

[195]Ibid., 19.

[196]Ibid.

infiltration into South Vietnam by destroying existing base areas. Upon learning of the Tet Offensive attacks, the 1st Brigade under Colonel Rattan devised a plan to relieve Quang Tri City by landing airmobile forces east of town astride enemy rear areas and lines of communication, thus forcing the enemy forces to withdraw or be destroyed.[197]

Beginning at 1600 hours on 31 January 1968, two troops from 1st Battalion, 12th Cavalry landed at five LZs east of the city.[198] The selected LZs were within small arms range from a defensive line including a PAVN heavy weapons company and sustainment troops from the K4 Battalion. 1st Cavalry commanders chose the selected LZs in order to take maximum advantage of surprise via vertical envelopment. The assault helicopters were led by scout helicopters and gunships that identified and suppressed enemy positions well enough so that no friendly helicopter losses ensued, despite intense enemy fire.

Once troops were on the ground, helicopter gunships and fixed wing CAS played an integral role in the continuing battle. Scout helicopters and gunships from the 1st Battalion, 9th Cavalry Squadron swarmed Quang Tri City looking for PAVN and VC units in the open.[199] Air-to-ground integration took place at the platoon and company levels conducted mostly by junior leaders well trained at the integration of air support with ground maneuver. Platoon leaders were the most common link in the chain, talking

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[197]Phillip D. Chinnery, *Vietnam: The Helicopter War* (Annapolis, MD: Naval Institute Press, 1991), 106.

[198]Willard Pearson, *Vietnam Studies: The War in The Northern Provinces 1966-1968* (Washingtion, DC: Government Printing Office, 1975), http://www.history.army.mil/books/Vietnam/northern/nprovinces-ch3.htm#quangtri (accessed 24 May 2013), 56.

[199]Villard, *The 1968 Tet Offensive Battles of Quang Tri City and Hue,* 21.

on “fires” frequencies to the cavalry’s gunships and addressing CAS requests through company headquarters to forward air controllers who vectored fixed wing sorties on target. It is likely that the units of 1st Battalion, 12th Cavalry would have met destruction if it were not for close coordination with fixed wing CAS and helicopter gunships.[200] The application of combined arms, employing helicopters and CAS aircraft decimated the enemy. The K4 Battalion, realizing its difficult position, broke contact by midnight leaving 63 of their dead behind.

Following the initial air assault, 1st Battalion, 5th Cavalry conducted a second air assault with two rifle troops near the village of Thong Thuong Xo southeast of Quang Tri City to cutoff the PAVN K6 Battalion.[201] The American troops had given up the element of surprise during the earlier air assault, and as a result, enemy fire was able to down one of the scout helicopters preceding the landings. In the resulting firefight, helicopter gunships suppressed the enemy fire, allowing ground force landings with no further helicopter losses. Again, the selected LZs landed aircraft well within small arms range of enemy positions, but the suppressive firepower provided the 1st Cavalry Division’s ample complement of gunship and scout helicopter support suppressed enemy anti-air efforts. As a measure of the flexibility of the air cavalry division, Company C, who participated in 1st Battalion, 5th Cavalry’s landings received a recall order and travelled directly from missions along the Laotian border to engage the enemy in this air assault.[202]

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[200]Ibid.

[201]Pearson, *Vietnam Studies*, 57.

[202]Villard, *The 1968 Tet Offensive Battles of Quang Tri City and Hue*, 22.

1st Battalion, 5th Cavalry's two rifle troops were to establish blocking positions and make contact with the enemy, which the units accomplished in short order. The cavalry troopers, just like in the earlier air assault, had descended upon enemy rear areas and near another heavy weapons company from the K6 Battalion. These second landings, along with the arrival of the aerial rocket artillery, sowed panic in the ranks of the K6 Battalion, and many PAVN soldiers fled the protection of their fighting positions in an attempt to escape envelopment.[203] Without the cover and concealment of their fighting positions, enemy soldiers were easy prey for the circling helicopter gunships. American gunship and air assault efforts, combined with a renewed attack by ARVN mechanized forces from the south decimated the K6 battalion. By dusk, K6 withdrew leaving behind 153 dead and eleven crew-served weapons.[204]

Of the other enemy elements involved in the battle for Quang Tri City, the 814th VC Battalion retreated from the village of Tri Buu following American fighter-bomber attacks coordinated with attacks by ARVN airborne troops from within the city on the afternoon of 31January 1968.[205] The 808th VC Battalion, who served as the enemy's northern blocking force, met defeat in an engagement with ARVN forces on 5 February 1968.[206] By the battle's end, the remnants of the PAVN K4 and K6 battalions along with the VC 814th and 808th battalions had shed most of their uniforms, discarded heavy

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[203]Pearson, *Vietnam Studies*, *57.*

[204]Villard, *The 1968 Tet Offensive Battles of Quang Tri City and Hue*, 23.

[205]Ibid., 22.

[206]Ibid., 24.

weapons, and broken in to squad and platoon-sized formations.[207] Using guerrilla tactics, retreating PAVN and VC soldiers joined groups of fleeing refugees and blended into the local populace. Other than mopping up operations, the battle was over in less than twenty-four hours.

The decisive actions that decided the outcome of the battle for Quang Tri City were the two successive air assaults by four rifle companies of the 1st Cavalry Division. While the stout defensive efforts by the city's ARVN defenders were pivotal to staving off enemy victory, it was the sudden appearance American cavalrymen in PAVN and VC rear areas along with constant harassment by helicopter gunships and fixed wing CAS that broke the enemy's will to fight. The dissolution of PAVN support troops and the interruption of resupply and reinforcement efforts proved too much for the enemy to handle. From the battle's onset until the end of mopping up operations on 6 February 1968, enemy forces suffered 914 soldiers killed and 86 captured. The defeat at Quang Tri City rendered PAVN 812th Regiment and two VC main force battalions combat ineffective for months.[208]

The enemy's overwhelming defeat at Quang Tri City was one of the most decisive victories of the Tet Offensive. On the positive side, it is a valuable battle to examine because it displayed a superior application of airmobile tactics. Yet the battle for Quang Tri City also reinforced the idea that tactical military superiority was the pre-eminent solution in Vietnam. American leaders including General Westmoreland thought that PAVN and VC forces could not continue the staggering losses inflicted upon them

[207]Pearson, *Vietnam Studies*, 58.

[208]Villard, *The 1968 Tet Offensive Battles of Quang Tri City and Hue*, 25.

during the Tet Offensive, Khe Sanh, and during earlier battles like the Ia Drang Valley. Instead, the victory at Quang Tri City demonstrated that U.S. forces never addressed the fact that a PAVN regiment and two VC battalions were able to infiltrate, attack, successfully retreat, and then fade away into what was supposedly friendly territory. Enemy freedom of maneuver within and support from the population was extensive. Additionally, even though ARVN and Region Forces/Popular Forces defended the city strongly, they were unable to defeat the assault on their own. A South Vietnamese force unable to stand on its own was a situation that repeated itself throughout the war, and even though the tactical victory was lopsided in favor of the cavalry, the overall lack of American initiative was on full display. In the battle for Quang Tri City, U.S. forces reacted to an enemy that chose the time and place of battle, and when defeated, PAVN and VC forces disengaged largely unhampered by effective pursuit. The strong ARVN defense of Quang Tri City and the 1st Cavalry Division counterattacks were noteworthy, but neither action addressed the underlying problems of population control and South Vietnamese governmental or military legitimacy. No amount of helicopters could control the South Vietnamese countryside nor could rotary wing aircraft effectively isolate the South from North Vietnamese support and infiltration. The U.S. Army trumpeted the victory at Quang Tri City as another example of attrition success and helicopters were integral to the lopsided outcome.[209]

[209]Ibid., 82.

Conclusions from Vietnam

U.S. forces entered Vietnam convinced that they could succeed where the French had failed, and that helicopters would enable their success.[210] During the conflict, allied forces grappled with threats including regular PAVN forces and VC insurgents. To deal with these threats, General Westmoreland focused U.S. forces toward the conventional "big unit" fight and conducted an attritional strategy to bleed the enemy dry.[211] The choice of attritional strategy sprang from limits on force structure in Vietnam imposed by global commitments and President Lyndon B. Johnson's restrictions.[212] General Westmoreland perceived the manpower limits as prohibitive in that they did not support the conduct of traditional counter-insurgent strategies such as isolation and population control.[213] U.S. forces were however, well outfitted for a firepower and mobility-based attrition war, possessing overwhelming advantages in airpower, artillery, and helicopters.

Rotary-wing aircraft were one of the main reasons that the firepower based attrition strategy was attractive to U.S. forces.[214] The helicopter was the main advantage U.S. forces possessed as compared to the French during the First Indochina War. Helicopter mobility enabled allied forces to fight with a reduced amount of troops more

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[210]Boyne, *How the Helicopter Changed Modern Warfare*, 136.

[211]Westmoreland, *A Soldier Reports*, 146.

[212]Richard H. Schulz, *The Secret War Against Hanoi* (New York: Harper Collins, 1999), 234.

[213]Thomas M. Kane, *Military Logistics and Strategic Performance* (London: Routledge, 2001), 102.

[214]Robert H. Scales, *Firepower in Limited War* (Washington, DC: National Defense University Press, 1990), 74.

effectively, unconcerned by Vietnam's difficult terrain. Existing U.S. force structure and training fit well with a mobility and firepower-based attritional strategy, where the main concern was to find and kill the enemy. Conversely, the preparations and mindset of the U.S. military did not lend itself well to pacification efforts, including less exciting missions like population control and isolation.

General Westmoreland believed that isolation efforts were materially and politically untenable, particularly along the borders with or inside of Laos and Cambodia.[215] The allies simply did not have enough troops to guard the borders and President Johnson doubted America would support an invasion of either Laos or Cambodia. Isolation, if it were to take place, would happen by killing the enemy away from cities and villages before they could influence South Vietnam's population.[216] The decision to forgo more traditional isolation efforts was one of the more fateful choices of the war because it allowed the enemy relatively unfettered access to reinforcements, supplies, and cross-border sanctuary.[217] The decision also meant that communist forces retained the initiative through most of the war, able to concentrate, disperse, and retreat to sanctuary at will.[218] Whether it was the military's "can do" attitude or incorrect assumptions, U.S. leaders including General Westmoreland thought that U.S. forces could destroy enemy resiliency using helicopter mobility and firepower. Specifically,

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[215]Ibid.

[216]Richard A. Hunt, *Pacification: The American Struggle for Vietnam's Hearts and Minds* (Boulder, CO: Westview Press, 1995), 33.

[217]Bruscino, Occasional Paper #17, 37.

[218]Bruce Palmer, *The 25-Year War: America's Military Role in Vietnam* (New York: Simon and Schuster, 1985), 152.

helicopters could move fire support assets to isolated firebases prior to battle, supply isolated outposts, move troops quickly to engage discovered enemies, and helicopter gunships could provide overwhelming firepower wherever needed. U.S. forces would conduct the "big unit war," leaving population control to South Vietnamese forces.

The focus on the "big unit war" ensured deployment of ample helicopter reconnaissance units such as the air cavalry. The easy availability of scout aircraft allowed commanders and the intelligence community to rely on them. Aircraft reconnaissance along with signals, communications, and electronic intelligence dominated the allied forces intelligence picture.[219] With this preference for technical sources of intelligence over human, U.S. forces did not develop a positive information flow with RF/PF and ARVN units.[220] By ceding population control to and not tapping into available information from South Vietnamese forces, the U.S. military was half-blinded. This blindness manifested as weakened allied initiative, because without local forces intelligence, U.S. forces were heavily reactionary.

The reliance on reconnaissance aircraft and air assaults to find and engage the enemy also fed the allied pursuit of military objectives at the expense political success. Each time helicopters or airmobile troops discovered, retreated, and defeated an enemy force, General Westmoreland calculated a victory under the guise of an attrition strategy. He believed that tactical victories would ensure success through attrition. Indeed, they were victories in an attrition war as long as U.S. losses remained low, but the victories

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[219]Joseph A. McChristian, *Vietnam Studies: The Role of Military Intelligence 1965-1967* (Washington, DC: Department of the Army, 1994), 96.

[220]Ibid., 150.

did not address the weaknesses inherent in the attrition strategy. Namely, the weaknesses included a lack of insurgent isolation, poor population control, and miscalculations about North Vietnam's willingness to accept casualties. These weaknesses served as terminal impediments to America's strategic success. The tactical successes of airmobile operations likely blinded General Westmoreland to his strategy's operational and strategic deficiencies before the 1968 Tet Offensive. After 1968, it was too late for General Creighton Abrams' change in focus toward pacification to alter the course of the war. Diminishing confidence in America guaranteed withdrawal.

Notable examples of allied tactical successes included the Ia Drang Valley, the siege of Khe Sanh, and the Tet Offensive. All of these battles required helicopters to win and were significant tactical defeats for the communists, but none of them equated to operational or strategic success because enemy formations were able to recoup or reinforce most of their losses in South Vietnam.[221] At best, these victories marked operational and strategic stalemate due to the allies' inability to nullify North Vietnamese support and sanctuary, which in turn ensured the eventual failure of population control. In America, President Richard Nixon interpreted stalemate to mean that escalation did not work and he campaigned and was elected on a platform to end the war.[222] Perceptions of stalemate made it seem like the war would never end and ran counter to General Westmoreland's narrative of impending victory.[223]

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[221]BACM Research, *Vietnam After Action Reports,* 194-195.

[222]U.S. Army War College, edited by Boone J. Bartholomees, *Guide to National Security Policy and Strategy* (Carlisle, PA: U.S. Army War College), 157.

[223]James H. Willbanks, *The Tet Offensive: A Concise History* (New York: Columbia University Press, 2007), 68-69.

From 1965 until the Tet Offensive, the American public was sold a story that victory was just over the horizon and all it required was escalation. With steady increases in troop levels starting in 1960, by May of 1968 America had 536,000 troops supported by 127 aviation companies in Vietnam.[224] The 1968 cost for that level of American support was $2.491 billion dollars and growing.[225] With few benefits to show and no victory in sight, America became less willing to pay the increasingly high price of support to South Vietnam. Vietnamization and an American forces draw down were the inevitable results, marked by President Nixon's decision to reduce U.S. troop commitments starting in 1969. The attrition strategy, which was successful at the tactical level, failed at the operational and strategic levels due to dwindling support at home. The choice of an attrition strategy, which required thousands of helicopters for success, came at the expense of isolation and pacification efforts.

As it happened, the helicopter was integral in combating VC and PAVN forces. The more helicopters America applied equated to tactical success, at least when viewed through the narrow lens of an attrition strategy. The perception of helicopter enabled tactical success fed the U.S. forces desire to concentrate on the fulfillment of military objectives, often at the expense of politico-strategic goals. The continual build-up of helicopters in Vietnam allowed ground units to weight their focus toward the destruction of enemy forces. During a war in which political considerations were of equal importance, this was a fatal flaw. Allied forces in South Vietnam never struck the proper

[224]Stanton, *Vietnam Order of Battle*, 333.

[225]Andreas W. Daum, Lloyd C. Gardner, and Willifried Mausbach, *America, The Vietnam War, and the World: Comparative and International Perspectives* (Cambridge, UK: Cambridge University Press, 2003), 157.

balance between military operations and politico-strategic goals like pacification and governmental legitimacy. Instead, U.S. forces brought 11,827 helicopters to war. These helicopters served as a heavy weight, balancing U.S. efforts heavily toward military objectives. In the end, helicopters were only significant at the tactical level, because they could not overcome strategic shortcomings.

CHAPTER 4

SOVIET HELICOPTERS VERSUS THE MUJAHIDEEN

One cannot appreciate the history of helicopters in expeditionary COIN campaigns without examining the Soviet experience in Afghanistan. Just as with America and France, a militarily superior country attempted to control a smaller country that was in danger of collapse. As in earlier conflicts, the Soviet conventional forces clashed with tribal militias and insurgents in protracted war. The insurgency sprang from xenophobia, religion, nationalism, and the imposition of a foreign, atheist ideology. Ubiquitous guerilla forces eventually outlasted the Soviet military and exhausted the political will of the Soviet people. As in the previous case studies, the difficult terrain of Afghanistan limited conventional force effectiveness. Similar to the French and Americans, the Soviet Army relied on the helicopter to counteract the advantages inherent to insurgents in a protracted war waged on difficult terrain. Soviet helicopter losses underlined the importance of rotary wing aircraft in Afghanistan. Throughout the conflict, the LCOSF lost 127 gunships, 174 armed transports, and 28 cargo helicopters totaling 329 helicopters.[226] This total represents half of the helicopters deployed to Afghanistan at peak strength.

At peak strength, the Limited Contingent of Soviet Forces (LCOSF) deployed over 650 helicopters to Afghanistan.[227] This was only 19 percent of Soviet frontal

[226]Russian General Staff, *The Soviet Afghan War*, 221.

[227]Boyne, *How the Helicopter Changed Modern Warfare,* 216. (This total does not account for aircraft that flew missions from inside the Soviet Union).

aviation's 3,500 helicopters.[228] Comparatively, the U.S. Army committed 70 percent or 127 of its 180 aviation companies to South Vietnam, which was a smaller country with less people.[229] The U.S. experience with helicopters in Vietnam influenced development of Soviet rotary wing tactics and equipment. The Soviets watched U.S. helicopter operations in Vietnam intently, but they only applied the lessons of conventional warfare.[230] The Soviet Army observed, acquired, and then applied airmobile techniques, but they focused on how to win against NATO forces in Europe. When faced with Mujahideen guerilla tactics, the LCOSF applied their helicopters in a fashion similar to what the French and Americans did in their respective conflicts.

The LCOSF committed their resources, including helicopters, as if military power and Marxist ideology could win the day. Operations like "free search and destroy," which indiscriminately targeted unsanctioned night movements was a striking example of a tactic that prioritized military success over political goals.[231] The Soviet Army sought to stabilize the Marxist government of Afghanistan, prevent outside interference, control the insurgency, and withdraw the bulk of their forces in a timely manner. The Soviet Union did not commit sufficient forces and resources to accomplish their goals.[232] The LCOSF achieved tactical military dominance, but operational stalemate. Without an effective

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[228]William P. Baxter, *The Soviet Way of Warfare* (Presidio, CA: Presidio Press, 1986), 191 (frontal aviation strength as of 1981).

[229]Stanton, *Vietnam Order of Battle*, 339.

[230]John Everett-Heath, *Soviet Helicopters: Design, Development, and Tactics* (Surrey, UK: Jane's Information Group, 1988), 179.

[231]Russian General Staff, *The Soviet Afghan War*, 219.

[232]Bruscino, Occasional Paper #17, 68.

political solution to legitimize Afghanistan's government, Soviet military tactical dominance amounted to little in the long term.

History of Soviet Involvement in Afghanistan

Afghanistan has a long history of xenophobia and resistance to invaders. Afghanistan's central position between some of the great empires of history ensured the country experienced frequent invasions. Empires including the ancient Greeks, Persians, mediaeval Arabs, Mongols, and British attempted to control the area that is now Afghanistan.[233] While most of these empires held influence for a time, all eventually withdrew or assimilated into Afghan culture. Afghanistan's unique shape is a result of its position between great powers, marked by the narrow finger that extends northeast to the Chinese border. The British ceded this feature when they drew Afghanistan's borders to serve as a buffer against Russian incursions toward India.

The British exercised direct influence from the mid 1800s until 1919. During the British tenure, they fought three Anglo-Afghan wars; the first from 1839-1842, the second from 1878-1880, and the third in 1919.[234] The first two Anglo-Afghan wars fit the pattern for conflict in Afghanistan, where a superior British-led force invaded, enjoyed some success, and met eventual defeat. The third Anglo-Afghan war, influenced by the Russian Bolshevik revolution, ended British influence in Afghanistan.[235] The British

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[233]Joseph J. Collins, *Understanding War in Afghanistan* (Washington, DC: National Defense University Press, 2011), 21.

[234]Ibid., 22-24.

[235]Lester W. Grau, edited comments: Since the Second Anglo-Afghan War, British-India controlled Afghanistan's foreign policy. Afghanistan was never a British colony.

stopped supporting the Afghan monarchy and withdrew their troops from the region, opening the way for Soviet influence. The Kingdom of Afghanistan was the first government to recognize the new Bolshevik government and they signed a treaty of friendship in 1921. The friendship treaty was a diplomatic agreement of non-aggression and neutrality, which rulers on both sides renewed until 1975.

Between 1921 and 1960, Afghanistan experienced a series of insurrections and coups. The unifying factor to Afghanistan's internal strife was resistance to centralized rule and disdain for progressive socialist reforms.[236] Characteristically, the disparate tribes of Afghanistan were extremely conservative and autonomous. Insurgents and guerrillas were a part of life in Afghanistan because they sprang up anytime the central government or an outside power asserted too much control.

Afghanistan joined the ranks of the Soviet Union's client states beginning in 1956, after they signed an accord with Prime Minister Mohammed Daoud Khan to equip and advise the Afghan army.[237] Following exposure to Soviet training, the Afghan army entered the Afghanistan's political scene as an agent of governmental and social change. In 1973, Soviet influence increased after Daoud overthrew the monarchy. His new government incorporated many members of the People's Democratic Party of Afghanistan (PDPA), a party aligned with the Soviet Union.[238] Soviet sway over Afghan affairs increased again in 1978 with the "April Revolution" when the PDPA ousted

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[236]Collins, *Understanding War in Afghanistan*, 26.

[237]Baumann, Leavenworth Papers #20, 131.

[238]Ibid.

Daoud and created the Democratic Republic of Afghanistan (DRA).[239] Installed as the DRA's new leader, Prime Minister Nur Mohammed Taraki took power.[240] Taraki immediately traveled to Moscow to ingratiate himself to the Soviet leader, Leonid Brezhnev.[241] Afghanistan had joined the ranks of the Soviet Union's socialist regimes, which accorded the country significant support. In the face of growing tribal resistance to the PDPA's attempts to centralize control and enforce social change, Taraki sought and received additional Soviet military assistance. By July of 1979, the Soviets stationed an airborne battalion along with a detachment of helicopters, tanks, and BMPs to guard Taraki's government.[242]

Afghanistan's internal strife continued in October of 1979 when a coup led by Hafizullah Amin killed Taraki.[243] Amin wanted to continue positive relations with the Soviet Union, but Soviet leaders did not trust him. The frequency of Afghanistan's coups along with the slaughter of Soviet advisors in Herat during March of 1978 signified that Afghanistan was terminally unstable.[244] After fifty years of Soviet investments, including over one billion dollars in aid, Afghanistan was a Soviet client state.[245] The Brezhnev

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[239]Ibid., 132.

[240]Russian General Staff, *The Soviet Afghan War*, 8.

[241]Baumann, Leavenworth Papers #20, 132.

[242]Russian General Staff, *The Soviet Afghan War*, 10.

[243]Baumann, Leavenworth Papers #20, 132.

[244]Larry P. Goodson, *Afghanistan's Endless War: State Failure, Regional Politics, and the Rise of the Taliban* (Seattle, WA: University of Washington Press, 2001), 57.

[245]Baumann, Leavenworth Papers #20, 131.

doctrine stated that faltering socialist states would be kept on course and from this point the Soviet incursion began. Amin invited Soviet forces into Afghanistan to assist in quelling the Mujahideen insurgency. The Soviet forces came, killed Amin, put their own man in charge, and prepared to restore order and governance in the country. With the LCOSF incursion came helicopters and rotary wing experience dating back to the early 1900s, but Afghanistan was to be the first large scale test of Soviet helicopter employment.

Soviet Rotary Wing History Prior to Afghanistan

Russia influenced the development of rotary wing flight beginning in the early 1900s. Rotary wing flight pioneer Igor Sikorskiy designed and built his first helicopter prototypes while working as a Russian aircraft designer in 1910.[246] Following the October revolution in 1919, research and development centralized and progress toward rotary wing aircraft continued. The Soviet Union flew its first helicopter, the TsAGI 1-EA, in 1930.[247] The Soviet's next evolution was the 2MG Omega tandem rotor prototype built in 1941, but the German invasion interrupted Soviet helicopter design and they did not produce an operational helicopter until 1945.[248] The projected mission for the first helicopters was artillery spotting. The Soviet Union designed and built their first modern helicopter, the Mi-1 Hare by 1948, which served as a light transport and liaison

[246]Everett-Heath, *Soviet Helicopters*, 3.

[247]Ibid., 11.

[248]Ibid., 20.

aircraft.[249] In 1951, Soviet helicopter development received a boost following U.S. helicopter use in Korea. After learning about U.S Marine helicopter support to the amphibious landings and Inchon, Korea, Joseph Stalin decided to motivate the Soviet Union's helicopter designers.[250] Fearing a Soviet technological lag, Stalin ordered the Mil-OKB and Yakolev firms to design, build, and fly one helicopter prototype each within a year.[251] The Mi-4 Hound and the Yak-24 Horse were the result and each flew in less than twelve months. Efforts to upgrade Soviet helicopters continued and in1957 the Soviet Union flew a prototype of their first turbine-powered production helicopter, the largest helicopter of the time, the Mi-6 Hook.[252]

With the creation of the Mi-6, helicopter development in the Soviet Union closed the gap with western helicopter designs like the CH-47, but they lacked employment doctrine. Early Soviet rotary wing organization placed helicopters under the control of the Air Force's air transport branch.[253] Development of helicopters and their requisite employment doctrine was slow under the air force. Rotary wing flight was not a high priority for the Red air force following World War II. Soviet helicopters did not conduct their first air assault exercises until 1956 and the air force did not release air assault doctrine until 1969.[254] Soviet military leaders including Colonel V. Ye. Savkin began to

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[249]Boyne, *How the Helicopter Changed Modern Warfare*, 96.

[250]Everett-Heath, *Soviet Helicopters*, 68.

[251]Ibid.

[252]McGowen, *Weapons and Warfare*, 121.

[253]Horn, *Military Innovation and the Helicopter*, 327.

[254]Ibid., 326-7.

see the need for heliborne mobility on the nuclear battlefield.[255] Helicopters could bypass contaminated areas more effectively than mechanized forces and land with less dispersion than airborne forces.[256] As in the United States, leaders including Colonel General Dmitry S. Sukhorukov foresaw the revolutionary possibilities of the helicopter, but overcoming the dual bureaucracies of the communist system and the air force proved too much. The Soviets required a catalyst that came with the Vietnam War.

It was not until the Vietnam War that the Red army conducted significant rotary wing exercises using helicopters for missions other than air transport. Following the success of American airmobile tactics in Vietnam, the red army and VVS conducted a series of exercises near the Dnepr River in 1967, testing air assault techniques and armed helicopters.[257] This led to motorized rifle battalions trained in airmobile techniques as the main elements used for air assaults. As the doctrine evolved through the 1970s, the red army created and allocated airmobile brigades and separate airmobile battalions at the front and army levels respectively.[258] The airmobile brigades and battalions did not possess organic aircraft, because the VVS owned all helicopters. Also during the late 1960s, inspired by the AH-1 Cobra's success in Vietnam, the Red air force began to arm

[255]Everett-Heath, *Soviet Helicopters*, 177.

[256]Ibid., 178.

[257]David M. Glantz, Research Survey No. 4, *The Soviet Airborne Experience* (Ft. Leavenworth, KS: Combat Studies Institute, 1984), 149.

[258]Everett-Heath, *Soviet Helicopters*, 180.

their helicopters.[259] They developed their first purpose-built assault helicopter gunship, the Mi-24 Hind, which flew in 1971.[260]

While it is clear that the Soviet military paid attention to the experiences of U.S. forces in Vietnam, they did not seem to pay attention to the lessons of the expeditionary COIN fight. The Red army made few assessments on how the helicopter fit in with regards to beating guerillas and insurgents. The air assault techniques and helicopter types developed by the Soviet designers during and after the Vietnam conflict reflected the lessons of a high intensity war. For better or worse, the LCOSF would invade Afghanistan prepared to beat NATO forces in Europe, not insurgents of the Hindu Kush.

Afghan Operational Environment

The LCOSF had three objectives when they invaded Afghanistan. First, their plan was to stabilize the country by seizing lines of communication and key infrastructure.[261] Second, Soviet forces would assume security duties from the Democratic Republic of Afghanistan (DRA) military so the locals could fight the guerrillas. Third, the Soviet military was to provide fires, logistics, and intelligence support to DRA forces. Stability of the DRA government and continued Soviet hegemony were the strategic goals. To achieve its goals, the LCOSF first attempted to achieve decisive victory using firepower and large mechanized formations. By 1980, the LCOSF adjusted to an expeditionary COIN approach, putting DRA forces in the lead. By 1982, DRA military failures showed

[259]Ibid., 178.

[260]Ibid., 119.

[261]Frunze Academy, *The Bear Went Over the Mountain*, xix.

that the Afghan military could not stand on its own, thereby lengthening the LCOSF commitment. The Soviet Union decided not to commit a large number of troops and instead planned to rebuild DRA armed forces. Soviet firepower and airmobile forces ensured the security of vital cities and infrastructure while advisors trained Afghanistan's armed forces to take over security.[262]

The LCOSF invasion committed 81,800 troops under the Soviet 40th Army.[263] Ground units possessed two motorized rifle divisions, one airborne division, an air assault brigade, and two separate regiments.[264] The invasion force included sixty helicopters, a strength that grew to 280 by 1980, and eventually reached 650.[265] The invasion put the 40th Army in control of most key infrastructure, the majority of population centers, and gave the Soviets tenuous control of Afghanistan's ring road. The number of Soviet forces committed to Afghanistan grew steadily until 1985 reaching a maximum of 115,000 with an additional 30,000 troops supporting the mission from bases inside the Soviet Union.[266] DRA troop strength at the time of the Soviet invasion was 50,000.[267] The Red army claims to have built the DRA strength up to 150,000 troops at peak levels, but with

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[262]Scales, *Firepower in Limited War*, 169.

[263]Russian General Staff, *The Soviet Afghan War*, 12.

[264]Ibid.

[265]Boyne, *How the Helicopter Changed Modern Warfare*, 216.

[266]Edward Girardet, *Afghanistan: The Soviet War* (New York: St. Martin's Press, 1985), 33.

[267]Bruce J. Amstultz, *Afghanistan: The First Five Years of Soviet Occupation* (Washington, DC: National Defense University Press, 1986), 180.

constant desertion the real number was likely somewhat less.[268] Soviet forces distrusted the DRA armed forces because of poor combat performance, treachery, and high desertion rates.[269] In 1980, the LCOSF showed their distrust by taking anti-tank and anti-aircraft weapons away from Afghan soldiers.[270] The poor performance of the DRA army and its poor working relationship with Soviet forces plagued strategic success throughout the war.

At the high-water mark in 1983, Soviet and DRA forces controlled only fifteen to 20 percent of Afghanistan.[271] Soviet and DRA control consisted of checkpoints along the ring road along with garrisons for Afghanistan's major cities. By not controlling the territory outside of cities and key infrastructure, the LCOSF enabled Mujahideen logistical support from, and freedom of movement through, most of Afghanistan. The LCOSF sought to enforce a measure of population control by hindering rebel movement and logistical support using airpower.

As an alternative to troops on the ground, the LCOSF adapted helicopters, air assault troops, and airpower as solutions to affect population control. Helicopter gunships supported air assaults and raids providing reconnaissance and firepower. Air assault troops conducted raids and ambushes to eliminate leadership and kill insurgents. Airpower, including helicopter gunships, attempted to depopulate the country. The basis for depopulation tactics took inspiration from Mao Zedong's description of guerillas that

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[268]Russian General Staff, *The Soviet Afghan War*, 48.

[269]Amstultz, *Afghanistan: The First Five Years of Soviet Occupation*, 184.

[270]Ibid.

[271]Goodson, *Afghanistan's Endless War*, 64.

could swim amongst the population as fish swim in water.[272] The LCOSF would "drain the water" to defeat "the fish."[273] Specifically, helicopters and fixed wing aircraft would "rubblelize" villages, destroy agricultural infrastructure, and generally shoot anything that moved to force the population to flee their homes.[274] Soviet forces used these tactics to remove the people of Afghanistan, thus removing a main source of Mujahideen logistical support. Soviet depopulation efforts were somewhat successful in making life more difficult for insurgents, but the results were eventually counter-productive. The indiscriminate use of airpower hardened the resolve of Mujahideen combatants, turned world opinion against the LCOSF, increased international support, and pushed refugee populations into cross border sanctuaries where they provided ready recruits.[275]

The Mujahideen strove to expel the foreign invaders and regain autonomy. During Afghanistan's first battles, the Mujahideen engaged Soviet invaders in force-on-force battles, paying a heavy price in lives.[276] By March of 1980, guerrilla warfare was the Mujahideen's primary tactic. In practice, they conducted surprise attacks on lines of communication, infrastructure, and weaker garrisons. Their tactical goals were to increase local influence, kill or terrorize opposition forces, or replenish supplies. As a

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[272]Mao Zedong, *On Guerrilla Warfare*, trans. by Samuel B. Griffith II (Urbana, IL: University of Illinois Press, 2000), 8.

[273]Robert F. Baumann, "Compound War Case Study: The Soviets in Afghanistan," http://www.globalsecurity.org/military/library/report/2001/soviet-afghan_compound-warfare.htm (accessed 6 May 2013).

[274]Goodson, *Afghanistan's Endless War*, 60-61.

[275]Boyne, *How the Helicopter Changed Modern Warfare*, 213.

[276]Russian General Staff, *The Soviet Afghan War*, 19.

rule, the Mujahideen struck the enemy when weak, tried to survive, and retired to attack again the next day.[277]

One of the Mujahideen's strengths was a lack of centralized control. The disparate tribes of Afghanistan united only in their desire to kill Soviet troops, and even this unity was weak. The lack of insurgent unity contributed to the Soviet lack of operational progress, because targeting leadership was ineffective.[278] Since Afghan leaders like Ahmad Shah Massoud held weak control over their fighters, killing those leaders rarely diminished the intensity of insurgent attacks. If the LCOSF were able to kill Massoud, his forces would still fight the next day.

Mujahideen strength fluctuated between 40,000 to 60,000 active fighters.[279] Portions of the local populace also engaged Soviet and DRA forces when threatened, but were not active fighters.[280] The Mujahideen's base unit included combat groups of 15-20 men, often stationed in a single village.[281] The next higher formation was the combat detachment consisting of 100-200 men. Detachments usually garrisoned a single fortress or spread out across multiple villages.[282]

Mujahideen air defense was lackluster in 1980, but as the conflict progressed, their anti aircraft-methods became more sophisticated. Mujahideen leaders paid

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[277]Jalali and Grau, *The Other Side of the Mountain*, 401.

[278]Ibid.

[279]Russian General Staff, *The Soviet Afghan* War, 57.

[280]Ibid., 64.

[281]Ibid., 58.

[282]Ibid.

insurgents for successful attacks against the LCOSF and the highest monetary awards went to aircraft shoot-downs.[283] A common tactic was the aircraft ambush. The Mujahideen baited Soviet helicopters into canyons by exposing ground forces. The Mujahideen then engaged offending helicopters with heavy machine guns concealed in cave mouths. Another Mujahideen tactic was to mine potential LZs and cover them with direct fire weapons like the RPG. The Mujahideen's most effective weapon against helicopters was the Chinese 12.7 mm DShK machine gun imported from Pakistan. Other threats included small arms fire, RPGs, and heat-seeking missiles including the "Stinger" and SAM-7[284] Soviet helicopter pilots adjusted their flight profile as the threat in Afghanistan evolved. For the first two years of the war, helicopters flew as low as possible. As the Mujahideen became more adept, helicopters adjusted their altitude to 500-700 meters to avoid small arms fire. In 1986, reacting to the Stinger missile threat, the VVS restricted daylight flights and limited helicopter support overall.[285] After 1987, LCOSF ground forces reduced their reliance on helicopters and conducted less offensive operations. Soviet helicopters only flew in direct support of ground troops and were more judicious with rotary wing employment overall. In addition to a determined and dangerous enemy, Soviet helicopters dealt with some of the most difficult terrain in the world.

Afghanistan's geography and weather were significant factors affecting Soviet forces. The Hindu Kush, Suleiman, and Paropamisus mountains cover 65 percent of the

[283]Ibid., 212.

[284]Baumann, Leavenworth Papers #20, 153.

[285]Ibid., 155.

country.[286] Most of Afghanistan's airfields are at altitudes of 1,000 meters or higher. The average mountain height is 3,000-4,000 meters, rising as high as 7,485 meters.[287] Twenty-five percent of the country is highland plateau dominated by semi-arid desert.[288] Maximum summer temperatures in the southern portion of the country climb to 126 degrees Fahrenheit. In northern Afghanistan, temperatures reach 113 degrees Fahrenheit.

High temperatures, high altitude, and thin air all combined to limit helicopter performance. Mountains and temperature differentials also spawned high winds.[289] Wind and desert conspired to cause dust storms. Dust then played havoc with engine efficiency and rotor blades, shortening the lifespan of these components and thus limiting helicopter availability. Dust storms and dust also caused safety concerns by limiting visibility for gunship support and increasing accident frequency at remote LZs. Even with the detrimental effects of terrain and weather, the helicopter was still the optimum choice to enable mobility in Afghanistan. Unfortunately for the LCOSF, their helicopters would also have to overcome Afghanistan's size, tribal population, and extensive borders.

Afghanistan is comparable to Texas in size at 647,500 square kilometers.[290] The population of Afghanistan as of 1979 was approximately 17 million people.[291] The population included hundreds of tribes. In descending order by population dominance,

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[286]Collins, *Understanding War in Afghanistan*, 14.

[287]Russian General Staff, *The Soviet Afghan War*, 210.

[288]Collins, *Understanding War in Afghanistan*, 14.

[289]Russian General Staff, *The Soviet Afghan War*, 4.

[290]Collins, *Understanding War in Afghanistan*, 14.

[291]Russian General Staff, *The Soviet Afghan War*, 5.

the tribes included Pashtuns, Tajiks, Hazaras, Uzbeks, and Turkmen.[292] Afghanistan shared 2,348-kilometers of border with the Soviet Union, 2,180-kilometers of border with Pakistan, 820-kilometers of border with Iran, and 73-kilometers of border with China.[293] Afghanistan's large area and extensive borders, both dominated by mountains, provided easy sanctuary to insurgents. To combat this difficult topography, the LCOSF needed large amounts of troops and many helicopters to provide mobility.

Considering that Afghanistan was double the size of South Vietnam and possessed a population roughly equal in size, it is hard to understand how the LCOSF thought that 650 helicopters could succeed compared to the U.S. forces commitment of over 4,000 helicopters. The reason that the LCOSF did not receive additional helicopters for its fight against the insurgents was that the Soviet Union maintained massive force structure arrayed against NATO and China along the respective borders. The comparison with U.S. helicopters strength presents a stark contrast, especially if one considers Afghanistan's exceedingly harsh terrain and limited road network. With only 19,000 kilometers of roads forming a ring to connect population centers including Kabul, Puli Khumri, Mazar-e Sharif, Andkhoy, Herat, Kandahar, and back to Kabul, the Soviet motorized forces would have to rely on the helicopter.[294] Afghanistan's limited roads and long porous borders made the country a difficult place to fight a war, especially against an insurgent enemy.

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[292]Collins, *Understanding War in Afghanistan*, 16.

[293]Russian General Staff, *The Soviet Afghan War*, 1.

[294]Ibid., 3.

Soviet Rotary Wing Aircraft and Frontal Aviation Organization

All Soviet helicopters and pilots belonged to the Soviet air forces or Voenno-Vozdushnye Sily (VVS).[295] VVS administered control of all helicopters for tasks including training, doctrine, tactics, safety, and maintenance. VVS retained operational control of some cargo helicopters under its transport aviation command, but relegated control of most other helicopters to front commanders.[296] For helicopters not assigned to the transportation branch, VVS allocated them to military districts and subdivided them to frontal aviation units including groups of forces and tactical air armies (TAA). Under this structure, VVS ceded helicopter employment decisions to the frontal commander. In the case of Afghanistan, the 40th Army received control of a tactical air army with helicopters, fixed wing aircraft, and a staff echeloned to support the frontal command structure down to battalion level.[297] Additionally, the 40th Army frontal commander sub-allocated helicopters units to divisions and separate regiments (airborne), but with no formal structure because of the scarcity of helicopters. These relationships resulted in an aviation command structure where ground commanders exercised more control over fixed wing aircraft and less control over helicopters in comparison to their American counterparts in South Vietnam.[298] The centralized control of helicopters meant they were less responsive to tactical level commanders. VVS helicopters assigned to frontal aviation

[295]Baxter, *The Soviet Way of Warfare*, 172.

[296]Everett-Heath, *Soviet Helicopters*, 172.

[297]Scales, *Firepower in Limited War*, 184.

[298]Ibid.

units received the moniker of armeiskaya aviatsiya or army aviation because of their habitual support to ground forces.

Aviation regiments were immediately subordinate to the frontal commander and his TAA. At peak strength in 1988, the 40th Army operated one composite, four separate, an attack helicopter regiment, and five separate helicopter squadrons apportioned across Afghanistan.[299] Using the attack helicopter regiment as a frame of reference, an aviation regiment included three squadrons of twenty helicopters each. The specific makeup of the attack regiment included two Mi-24 Hind attack squadrons and one assault squadron with Mi-8 Hips.[300] The DRA air force also fielded 150 of its own helicopters by the end of the war.[301]

The limited number of helicopter units in Afghanistan restricted LCOSF' access to helicopter support by geography and operations tempo. Geography was a limiting factor because most of the helicopters flew out of fourteen main locations around Afghanistan.[302] Fourteen heliports were inadequate considering the size of Afghanistan. The high demand for limited rotary wing assets negatively affected air assaults because ground units often flew with too few helicopters. During one air assault in 1987, the LCOSF air assaulted near the Salang pass using fourteen Mi-8s to move 1700 troops in

[299]Russian General Staff, *The Soviet Afghan War: How a Superpower Fought and Lost*, 320.

[300]Everett-Heath, *Soviet Helicopters*, 172.

[301]Baumann, Leavenworth Papers #20, 153.

[302]Russian General Staff, *The Soviet Afghan War*, 320.

four hours.[303] For comparison purposes, the 1st Cavalry Division in Vietnam was able to move most of a brigade in one lift using organic aircraft.[304] The LCOSF, with its limited assets, used too few helicopters on its air assaults, spoiling surprise and enabling insurgent escape. To conduct air assault in Afghanistan, the VVS operated four mainstay helicopters.

The four main helicopters used by the Soviet Union in Afghanistan were the Mi-6 Hook, Mi-8 Hip, Mi-9 VZPU, and the Mi-24 Hind.[305] The LCOSF also used small numbers of Mi-2 Hare and Mi-4 Hound aircraft, but the high altitudes and temperatures limited the performance of these airframes.[306] Soviet forces employed the Mi-6 as a cargo helicopter and air assault transport. The Mi-8 was the LCOSFs utility helicopter performing armed transport, attack, and reconnaissance missions. The Mi-9 was a C2 aircraft. The Mi-24 served as an attack, reconnaissance, and assault aircraft.[307]

Soviet Use of Helicopters in the Utility and Assault Roles

In an article published in Red Star in September of 1981, Colonel General Dmitry S. Sukhorukov wrote that vertical envelopment was “an important maneuver without

[303]Ibid., 217.

[304]Johnathan M. House, *Toward Combined Arms Warfare: A Survey of 20th-Century Tactics, Doctrine, and Organization* (Ft. Leavenworth, KS: Combat Studies Institute, 1984), 162.

[305]Everett-Heath, *Soviet Helicopters*, 210.

[306]Baumann, Leavenworth Papers #20, 153.

[307]Russian General Staff, *The Soviet Afghan War*, 210.

which modern offensive operations are not possible."[308] Vertical envelopment was one of the most effective ways to nullify the advantages of guerilla tactics as fought in Afghanistan. Faced with travel along roads dominated by steep slopes and canyons while under constant over watch by Mujahideen informers, Soviet motorized troops rarely achieved surprise.[309] Once warned of an impending ground raid, the Mujahideen ambushed or retreated to sanctuary using their superior knowledge of local terrain to strike and escape before LCOSF units could trap them.[310] Following escape, they moved to the nearest safe village, hid among non-combatants, and prepared to fight the next day. To break this pattern, the LCOSF began using airmobile forces to envelop the Mujahideen. Freed from the constraints of terrain, Soviet airmobile forces enjoyed advantage because the Mujahideen could not predict the location of nor effectively protect against air assaults. Air mobility was the LCOSF's answer to regain tactical initiative. The primary airframe used to conduct airmobility was the Mi-8.

The Mi-8 was the primary assault helicopter, able to carry twelve to twenty-four troops. The Mi-6 and Mi-24 were alternate platforms used for large air assaults and squad insertions respectively.[311] The Soviet air force supplied the helicopters, while airmobile troops came from army airborne, air assault, and specially trained motorized rifle

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[308]Everett-Heath, *Soviet Helicopters*, 176.

[309]Baumann, Leavenworth Papers #20, 139.

[310]Ibid.

[311]Graham H. Turbiville, "Soviet Airborne Operations in Theater War," *Foreign Policy* 13, no. 1-2 (1986): 171, http://www.dtic.mil/dtic/tr/fulltext/u2/a199545.pdf (accessed 21 April 2013).

battalions.[312] At peak strength, LCOSF airmobile troops included one airborne division, one air assault brigade, a separate parachute regiment, and two separate air assault battalions.[313] The Soviet paratroopers were airmobile forces because they conducted almost no parachute assaults in Afghanistan.[314] Of special interest was the separation between airmobile forces and their helicopters. Since helicopters were owned by the VVS and there were never enough to meet requirements, habitual relationships between airmobile forces and helicopter units did not develop. Without habitual relationships, planning and response times increased, sapping the initiative and effectiveness of airmobile operations.[315] Habitual relationships spawn familiarity with standard operating procedures. In the absence of familiarity, ground forces and aviators require time to establish effective working relationships as opposed to units with habitual assignments that perform more efficiently. Regardless of underlying structural problems, the most effective mission types conducted by airmobile forces were blocking positions, raids, and ambushes.[316]

The LCOSF used helicopter-inserted blocking positions to cut off enemy retreat during cordon operations and to seize dominant terrain. Air assault forces established security at locations unreachable by ground, enabling objective isolation.[317] From 1980 to

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[312]Ibid., 173.

[313]Russian General Staff, *The Soviet Afghan War*, 198.

[314]Ibid., 222.

[315]Boyne, *How the Helicopter Changed Modern Warfare*, 217.

[316]Ibid., 208.

[317]Ibid., 204.

1985, the Red army used helicopters in large-scale cordon operations as a preferred tactic. During the fifth Panjshir Valley offensive in May of 1982, Soviet airmobile forces preceded the ground assault by three days, seizing dominant terrain in the valley to envelop enemy forces.[318] The envelopment was not successful because they failed to isolate the valley allowing many Mujahideen to escape.[319] Insufficient access to helicopters stymied Soviet isolation efforts. With more helicopters, the LCOSF could air assault more forces to more locations faster, which would have more effectively isolated the valley.[320] With too few helicopters, Soviet forces were unable to nullify the advantages of guerrilla retreat during large-scale ground operations because they were unable to trap the Mujahideen.

As the war progressed, LCOSF rotary wing tactics evolved from large-scale cordon support to predominantly smaller raids focused on targets like Mujahideen leadership and supply depots.[321] With the change in focus to smaller raids, Soviet airmobile forces became more effective because they could support the requisite moves better with the limited amount of helicopters. By focusing on smaller objectives, a company air assaults were sufficient for objective isolation. An entire company could fly

[318]Baumann, Leavenworth Papers #20, 141.

[319]Roy Oliver, *Islam and resistance in Afghanistan*, 2nd ed. (New York: Cambridge University Press, 1990), 175.

[320]Boyne, *How the Helicopter Changed Modern Warfare*, 217.

[321]Everett-Heath, *Soviet Helicopters*, 189.

on eight ships, which was often the maximum unit size moved in a single lift.[322] Abdul Haq, a Mujahideen commander commented, "I believe that heliborne paratroop operations could be described as the most effective Soviet tactics."[323] Indeed, heliborne raids were tactically effective, but tactical victory rarely translated to operational success. The disparate tribes of Afghanistan were not reliant on central leadership and they easily recouped the losses from destroyed supply depots by obtaining replacements from cross-border sanctuaries like Pakistan and Iran. If Soviet raids were to attain lasting operational effects, the first step was Afghanistan's isolation. The LCOSF chose to apply helicopter-inserted ambushes as one of the ways to deal with support from cross-border sanctuaries.

Helicopter borne ambushes aimed at interdiction of Mujahideen supply routes was a preferred Soviet isolation tactic. During a 1986 ambush in eastern Afghanistan, four Mi-8s, and four Mi-24s inserted thirty-five troops fifteen kilometers from a suspected convoy route at sunset.[324] The Mi-24s loitered at a nearby ground laager site. At 0400, the ambush force engaged six trucks, of which two tried to escape, but the on call Mi-24s pursued and destroyed them.[325] Reducing the flow of supplies and reinforcements from cross border sanctuaries was a way to reinforce the success of raids elsewhere in Afghanistan. It was however, unrealistic to expect that 650 helicopters could effectively interdict Mujahideen resupply along Afghanistan's mountainous borders. This point is

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[322]Frunze Academy, *The Bear Went Over the Mountain: Soviet Combat Tactics in Afghanistan*, 99-102. (In this Vignette, eight helicopters moved a single company, this is a common example, but helicopters carried less at higher altitudes).

[323]Everett-Heath, *Soviet Helicopters*, 190.

[324]Ibid., 206.

[325]Ibid.

especially salient considering that helicopters were essential to LCOSF sustainment and convoy security missions, further limiting the aircraft available for interdiction.[326]

The LCOSF was reliant on rotary wing aircraft for resupply, air movement, casualty evacuation, minelayer, and search and rescue missions. The DRA outpost at Khowst, under siege throughout most of the war, survived because of helicopter resupply.[327] The Mi-6, with its ability to lift twelve tons, was crucial to keeping troops supplied.[328] Mines laid by the Mi-24 and Mi-8 did affect isolation, but the effects were mostly counter-productive because indiscriminate casualties further alienated the population. It is difficult to dispute the importance of missions like resupply and casualty evacuation, but these missions were rarely decisive against the Mujahideen. With limited helicopter strength, aircraft not committed to ambush, interdiction, or raid missions were only maintaining stalemate. With Mujahideen freedom of movement covering 85 percent of Afghanistan, stalemate benefitted the insurgents. The Soviet Union needed more troops and helicopters or they needed a change in strategy.

Soviet Use of Helicopters in the Reconnaissance and Attack Roles

The Mi-24 and the armed Mi-8mt were the primary attack helicopters in Afghanistan. VVS did not possess dedicated scout helicopters, so attack helicopters conducted both reconnaissance and attack missions. Mi-24 armament included a 12.7-

[326]Boyne, *How the Helicopter Changed Modern Warfare*, 223.

[327]Baumann, Leavenworth Papers #20, 141.

[328]Russian General Staff, *The Soviet Afghan War*, 210.

mm gun, up to four 57-mm or 80-mm rocket pods, anti-tank missiles, and even bombs.[329] Afghani insurgents called the Mi-24 Hind the "Devils Chariot."[330] The Mi-8mt carried 12.7-mm gun, up to six 57-mm rocket pods, anti-tank missiles, and door mounted 30-mm grenade launchers.[331] In many respects, the Mi-8mt and Mi-24 were interchangeable on missions. The Mi-24 enjoyed advantages over the Mi-8mt in survivability and performance.[332] Both helicopters conducted missions across the spectrum of aviation operations. Soviet aviation classified helicopter missions into three categories including fires, air assault, and special.[333]

The LCOSF flew helicopter fire missions against pre-determined targets, targets of opportunity, and on call support.[334] A primary pre-determined attack helicopter mission was LZ preparatory fires.[335] This mission suppressed enemy anti-aircraft weapons and softened enemy defenses for assaulting troops. The problem with LZ preparatory fires was that they spoiled surprise, which enabled Mujahideen escape.[336] In combat against guerrillas, surprise is one of the most important factors in seizing

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[329]Ibid., 168.

[330]McGowen, *Weapons and Warfare*, 169.

[331]Boyne, *How the Helicopter Changed Modern Warfare*, 221.

[332]Boyne, *How the Helicopter Changed Modern Warfare*, 217.

[333]Russian General Staff, *The Soviet Afghan War*, 214.

[334]Ibid.

[335]Ibid., 216.

[336]Frunze Academy, *The Bear Went Over the Mountain*, 102.

initiative. In order to catch illusive insurgents, insertion of blocking positions beyond anti-aircraft range to cutoff insurgent retreat was a more effective tactic.

Helicopters also conducted on-call fire missions. The LCOSF used helicopters on strip alert as quick reaction forces, but the limited availability of gunships increased reaction times. During the first years of the war, the response time for on call gunship support took hours, which allowed the Mujahideen ample time to strike and escape.[337] As more helicopters joined the fight, Soviet forces reduced helicopter response times to ninety minutes.[338] Limited helicopters still factored into the dismal reaction time, but centralized control became the primary obstacle limiting attack helicopter effectiveness. The Soviet Union's preference for central control resulted in a lack of pilot initiative. The Mujahideen reported multiple instances of Soviet gunship pilots who bypassed actively hostile targets to attack empty villages and abandoned fortifications.[339]

Regardless of the drawbacks, the Mujahideen feared Soviet attack helicopters more than any other weapon system.[340] "Free search and destroy" missions along with depopulation air attacks were the mission types most responsible for creating fear of helicopters within the Afghan population. On "free search and destroy," helicopter gunships attacked any unscheduled nighttime movement.[341] Depopulation attacks strafed villages, crops, irrigation systems, and livestock as a part of the Soviet strategy to

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[337]Scales, *Firepower in Limited War*, 162.

[338]Ibid., 187.

[339]Ibid., 190.

[340]Girardet, *Afghanistan: The Soviet War*, 42.

[341]Russian General Staff, *The Soviet Afghan War*, 219.

encourage the rural population to leave, thereby denying the Mujahideen population support inside Afghanistan.[342] Helicopters committed to close support and free fire missions were some of the most effective anti-insurgent tactics used in Afghanistan.[343] In addition to fires based mission, Soviet special category helicopter missions also played a role in reducing Mujahideen effectiveness.

Examples of attack helicopter special category missions included reconnaissance, interdiction, and convoy security. Reconnaissance was a continual mission for helicopters, usually conducted in conjunction with other missions such as interdiction.[344] Attack helicopters were critical to Soviet interdiction efforts because of limited ground troops on the border. Helicopter gunships conducting interdiction located supply caravans along common routes. If the helicopters determined hostile intent, they destroyed the caravan. If the caravan seemed benign, gunships fixed the caravan in place and landed ground forces to search it. While not successful at isolating the Mujahideen from cross-border resupply, interdiction was one example of a mission that held the initiative against the Mujahideen. From July to September 1982, the LCOSF conducted eighteen heli-borne ambushes against Mujahideen supply caravans. Fourteen of the ambushes were successful, resulting in twenty prisoners and 200 Mujahideen killed, as opposed to three friendly casualties. Additionally, these ambushes captured 200 weapons, significant amounts of ammunition, and a large amount of money.[345] LCOSF assigned

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[342]Baumann, Leavenworth Papers #20, 142.

[343]Scales, *Firepower in Limited War*, 187.

[344]Russian General Staff, *The Soviet Afghan War*, 220.

[345]Frunze Academy, *The Bear Went Over the Mountain*, 158.

reconnaissance, air assault, and Special Forces (SPETZNAZ) units ambush missions throughout the war.[346] By challenging Mujahideen logistics with helicopters, the rebel's lives were more difficult.[347]

The Mujahideen preference for attacking Soviet supply convoys underlined the importance of logistics in Afghanistan. Indeed, attacks on Soviet resupply convoys were a staple Mujahideen tactic. With the difficult terrain of Afghanistan, armed helicopters were the most viable convoy security element. Helicopters conducted route reconnaissance, deterred enemy attacks, and engaged discovered ambushes more effectively than any other platform.[348] The Mi-24 and Mi-8mt also occasionally carried squads for insertion at dominant terrain along a convoy route. These elements provided over watch until the convoy passed and leapt to the next dominant terrain feature.[349] Convoy security was important for ensuring the flow of supplies, but it was a reactionary mission. The more helicopters that the LCOSF employed on convoy security signified enemy command of initiative. If the Soviets had isolated the Mujahideen from cross-border support and defeated rebel groups away from supply lines, convoy security would have been a less important task. As it turned out in Afghanistan, the Mujahideen attacked LCOSF convoys at will, forcing the LCOSF to surrender initiative. Helicopter convoy security missions would not win the war in Afghanistan.

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[346]Ibid., 151.

[347]Bruscino, Occasional Paper #17, 62.

[348]Russian General Staff, *The Soviet Afghan War*, 219.

[349]Baumann, Leavenworth Papers #20, 152.

The most effective mission types flown by Soviet attack helicopters were interdiction and "free search and destroy." These missions brought the fight to the enemy as opposed to missions like convoy security that were reactionary. Additionally, "free search and destroy" and interdiction missions reinforced LCOSF attempts at population control and insurgent isolation, tactics which reduced Mujahideen effectiveness. Predictably, the most effective attack helicopter missions probably challenged DRA legitimacy. The attack helicopter's military objectives were symptomatic of the larger disconnect between tactics and strategy, where tactical goals gave no accounting to political considerations. The Mi-24 fulfilled its purpose by intimidating or killing. The prominence of the Mi-24 in the Mujahideen's memory signifies the Soviet Union's almost singular pursuit of military objectives over political. Soviet depopulation tactics were not possible without the helicopter, and in light of the brutality unleashed, it should have come as no surprise that DRA legitimacy never took hold among the people of Afghanistan. After Soviet operations displaced or killed 41 percent of Afghanistan's population, the LCOSF's preference for military solutions was clear.[350]

Tactical Case Study: Air Assault at Islam-Dara Canyon

A Soviet airmobile operation worth examination took place in Afghanistan's Islam-Dara Canyon beginning 18 November 1985. A battalion from the 103rd Airborne Division received orders to air assault into blocking positions on five hills surrounding the canyon to seal in Mujahideen forces. The force including the airborne regiment's

[350]Amstultz, *Afghanistan: The First Five Years of Soviet Occupation*, 184.

other two battalions, would follow the air assault approaching from the south to seal the valley and destroy the Mujahideen training base.[351]

The mission had eight Mi-8s for the air assault, four Mi-24s gunships, artillery, and fixed wing support. The insertion plan landed one company plus a reconnaissance platoon on the first day and two companies on the second day to occupy blocks in the east, north, and west. The battalion selected its first and second LZs inside the canyon near the eastern blocking position. LZ one was likely in range of enemy defensive positions within the canyon. The battalion hoped that LZ preparatory fires could suppress enemy anti-aircraft efforts, but they had poor intelligence regarding air defense positions. The position of the LZ in full view of the enemy camp and the significant time separation between insertions did not bode well for a successful cordon mission.[352] Even if things unfolded according to plan, most of the camps insurgents could escape to the north or west before the second lift could seal the valley.

Just prior to the first group's landing on 18 November, artillery and escorting Mi-24 gunship fired ineffectually near LZ one. The preparatory fires real effect was to alert the camp's defenders. During the approach to LZ one, the Mujahideen shot down or disabled four Mi-8s and wounded seven paratroopers. The other four assault helicopters aborted their landings and returned to base. Without accurate intelligence or dedicated reconnaissance helicopters to determine the location of Mujahideen defensive positions before landing, the first day was disastrous. Accurate intelligence is crucial in COIN, and because the VVS neglected to determine enemy dispositions near the LZ, less than half of

[351]Frunze Academy, *The Bear Went Over the Mountain*, 99.

[352]Ibid., 99-102.

the original force landed. The small force of paratroopers seized and occupied the first blocking positions on the two eastern hilltops by 1900 on 18 November.[353]

The next morning, the paratroopers directed intensive artillery and air strikes on enemy positions within the canyon. Now that friendly forces could see enemy defensive positions, forward air controllers called in air strikes and artillery to destroy all visible defenses. The rest of the battalion landed uneventfully in LZ two on 19 November. The northern block set its position at 0800 on 19 November and the western blocking position was in place by 0400 on 20 November. The remainder of the airborne regiment moved toward the canyon by ground assault convoy closing from the south on 19 November. The regiment destroyed the Mujahideen camp over the next few days. Enemy losses included thirty-five dead.[354]

The limited number of aircraft committed to the mission forced successive insertions over two days, which negated any chance at an effective cordon. Lackluster intelligence, no reconnaissance, and poor LZ selection conspired to set the conditions for the four helicopters shot down on 18 November. Landing in a canyon, under enemy observation, and with no intelligence about defensive positions was poor planning. Seizure of the eastern blocking positions was possible by landing outside the canyon.[355] Intelligence about remote insurgent base camps is difficult to attain. Reconnaissance flights or scouts were a suitable alternative to intelligence, and the LCOSF was blind without them. Without enemy information, LZ selection should error on the side of

[353]Ibid.

[354]Ibid.

[355]Ibid.

caution, landing troops outside of enemy weapons range. Lastly, cordons should set all blocks simultaneously, otherwise insurgents will escape to fight another day.

At mission's end, the Soviet paratroopers destroyed the base camp, but did not trap or kill many Mujahideen. It is difficult in hindsight to call the mission a success because many Mujahideen likely escaped the canyon the first night before the cordon was set. The paltry thirty-five enemy dead reinforces the perception of mission failure. The low body count does not justify the regiment's effort or the four helicopters lost. Upon destruction of the camp, the airborne troops departed and the Mujahideen reoccupied Islam-Dara Canyon. This pattern repeated itself throughout the war.

Conclusions from Afghanistan

As in previous case studies, the helicopters committed to Afghanistan provided tactical mobility and firepower advantages that the Mujahideen could not match. Helicopter employment was integral to LCOSF expeditionary COIN operations, but Soviet tactics did not match their strategy of improving the DRA armed forces and enhancing governmental legitimacy. Tactically, the LCOSF used harsh measures like depopulation and indiscriminate mine-laying, which were counter to strategic goals. Afghanistan's people were less likely to accept DRA control after experiencing unrestricted Soviet Mi-24 fires. Additionally, the equipment and manpower committed by the Red army did not match their tactical or strategic goals. 650 helicopters and 115,000 troops were not enough to police Afghanistan's borders, control the population, or reinforce DRA governmental legitimacy. To address the shortage of manpower, the LCOSF applied the helicopter's firepower to enable control by depopulation. If the

Afghanistan's rural population left the 85 percent of the country not under Soviet influence, the Mujahideen would be easier to defeat.

Depopulation was a potentially decisive population control tactic, but without congruent efforts to isolate Afghanistan from outside support, depopulation successes were fleeting.[356] Many refugees that left Afghanistan returned as Mujahideen, supplied and trained by Soviet adversaries including the United States, China, and Saudi Arabia.[357] LCOSF helicopter-borne airmobile units attempted isolation, but to expect successful isolation from the air was unrealistic. Without an equally effective isolation effort by ground forces along Afghanistan's borders, Soviet depopulation efforts were doomed. Depopulation by airpower was a poor tactic that only hardened Afghani resolve against the DRA and its Soviet masters. Mujahideen memories of Mi-24s ranging Afghanistan indiscriminately destroying villages, crops, and wells committed the rebels to continuous war. Considering LCOSF tactical conduct, the Mujahideen would never accept DRA or Soviet rule as legitimate.

All of these points underline the Soviet Union's pursuit of tactical military superiority at the expense of strategy. In fact, tactical military success for the LCOSF likely guaranteed strategic failure. In the end, the LCOSF relied on the helicopter to win the war without applying enough economic and political development. Helicopters in Afghanistan only achieved stalemate, and stalemate meant a loss for the Red army.

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[356]Baumann, "Compound War Case Study: The Soviets in Afghanistan."

[357]Ibid.

CHAPTER 5

CONCLUSION

> A conventional military force, no matter how bent, twisted, malformed or otherwise 'reorganized' is still one hell of a poor instrument with which to engage insurgents.[358]
>
> — Anonymous U.S. General

The French Armed Forces in Algeria, Allied Forces in South Vietnam, and LCOSF in Afghanistan were helicopter-equipped militaries organized and trained to fight conventional warfare. As conventional organizations, these militaries understandably used helicopters to seek military dominance, often blind to or in spite of politico-strategic goals. Inevitably, the militaries in question employed helicopters to do what helicopters do best: they found the enemy, overwhelmed him with firepower, and enabled vertical envelopment. By organizing and equipping themselves for airmobile warfare, these militaries achieved a measure of tactical military success that would have been impossible without helicopters. The helicopter's firepower and mobility decimated insurgents at the tactical level wherever committed, but because of the nature of irregular warfare, tactical dominance was indecisive. Using guerilla tactics, irregular enemies rarely granted decisive battle. Additionally, faced with restrictions regarding the application of firepower and mobility, counter-insurgent forces were limited in their pursuit of decisive results. Without decisive victory, military dominance was irrelevant.

Victory in expeditionary COIN required a more balanced approach where political pursuits like population control, insurgent isolation, and governmental

[358]Jenkins, *The Unchangeable War*, 6.

legitimacy were as important as killing the enemy.[359] Indeed, governmental legitimacy was a strategic goal for each of the wars in Algeria, South Vietnam, and Afghanistan, but none of the militaries did what was necessary. Enamored by airmobile successes and trapped by a conventional mindset, the French Armed Forces in Algeria, Allied Forces in Vietnam, and LCOSF in Afghanistan could not see their respective strategic shortcomings clearly. Those within the militaries in question that realized strategic bankruptcy were unable to affect the requisite changes.

Organizations that possess helicopters naturally seek tactical military dominance based on mobility and firepower, even if that dominance counters stated political strategy. To paraphrase the quote at the beginning of chapter one, "French forces, U.S. forces, and the LCOSF had helicopters and so they had a helicopter strategy even irregular warfare."[360]

Algerian War Lessons

French conduct of the war in Algeria is both a positive and negative example of how to prosecute expeditionary COIN campaign. Negatively, French political conduct demonstrated a strong disconnect between military and political goals, whereby they squandered military victory by not addressing Algeria's governmental legitimacy.[361]

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[359]See expeditionary COIN definition on page 4 of this thesis.

[360]Ibid.

[361]Raymond A. Millen, *The Political Context Behind Successful Revolutionary Movements: Three Case Studies: Vietnam (1955-63), Algeria (1945-62), and Nicaragua (1967-79)* (Carlisle, PA: Strategic Studies Institute, 2008), 25-34.

Positively, French military tactics and operations were the strongest of the three case studies, and their rotary wing employment innovations influenced all that followed.

Reeling from their previous loss to insurgents in the First Indochina War, the French Army quickly adjusted its tactics and weapons to fight the ALN and FLN. The French formula for victory included *quadrillage* for population control, *barrages* for isolation, and airmobile reserves to trap and pursue guerrillas in Algeria.[362] The French military acquired helicopters and created airmobile doctrine to enable the ALN's defeat. The French were successful at both isolating the ALN and controlling Algeria's population militarily. Helicopters were critical to both of these efforts, providing mobile reserves to destroy cross-border penetrations, while cordoning and eliminating internal pockets of resistance.

The air assault arose as the decisive mission for helicopters in Algeria, used mostly to surprise the enemy by landing in his midst. The French were the first to arm helicopters in combat, which they used mostly for air assault security.[363] Reconnaissance and C2 missions also made their marks during air assault operations from 1957 onwards as their helicopter fleet expanded include Alouette IIs. Last, helicopter resupply and air movement missions reduced the risk to ground troops and friendly convoys, reducing French casualties. By most objective measures, the helicopter was crucial to French tactical and operational military dominance.

What the helicopters could not do was politically legitimize Algeria's colonial government. To Algeria's nine million Muslims, an oppressive government controlled by

[362]Trinquier, *Modern Warfare: A French View of Counterinsurgency*, 82.

[363]Boyne, *How the Helicopter Changed Modern Warfare*, 74.

a minority of one million Europeans was illegitimate no matter how many helicopters the French committed. Military population control, which the French achieved, meant little because it did not challenge the FLN's political control of Muslim Algerians.[364] Additionally, without addressing FLN strongholds outside of Algeria, the French military was powerless to affect the FLN's narrative, which swayed both the international community and a portion of France's population against the war effort.

At best, French helicopters bought time for strategy adjustment through tactical and operational military success. At worst, helicopter successes reinforced perceptions that military dominance over the ALN in Algeria was the path to strategic victory. Regardless of the ALN's status in Algeria, since France did not address Algeria's underlying political inequities, the conflict was unlikely to end. This reality was enough to turn metropolitan France away from the war, in spite of the helicopters outstanding performance.

Vietnam War Lessons

U.S. conduct of the Vietnam War is a cautionary tale of what happens when a large conventionally oriented force applies helicopters and airmobility to irregular warfare.[365] The conflict in Vietnam holds a unique place within the three case studies because its insurgency was the most mature. North Vietnam's extensive support to the VC along with its commitment of PAVN regulars presented unique challenges to the

[364]Arnold, *Jungle of Snakes*, 118-119.

[365]Jenkins, *The Unchangeable War*, 3-10.

allies. Confronted by an insurgency and regular forces, U.S. units found it irresistible to focus on conventional war.

Integrated into the force structure from the mid 1950s, helicopters were integral to the conventional focus. Being the only platform that could enable mobility in South Vietnam's dense jungles, helicopters made attrition seem like a viable strategy.[366] U.S. forces were happy to fly around Vietnam seeking glory while ARVN soldiers conducted the boring task of population control. Isolation of VC forces and PAVN infiltrators from supplies brought in by the Ho Chi Minh trail was not a high priority. It was thought that if airmobile forces could find and kill enough enemy soldiers, they would give up.[367]

Airmobile units like the 1st Cavalry Division with its 435 helicopters were purpose built to find and destroy the enemy, and that is exactly what the unit did. In its 1965 configuration, the 1st Cavalry Division was not suited to pursuit of political objectives, but finding and killing the enemy was what the division lived for.[368] Reconnaissance helicopters from air cavalry troops became a primary means to locate enemy forces. In order to find the enemy, reconnaissance arose as the most important mission set in Vietnam because it enabled U.S. forces reclamation of tactical initiative. Enemies found by air cavalry troops experienced the helicopters firepower and the advantages of airmobility first hand. With entire helicopter squadrons dedicated to reconnaissance, the easy availability of scout aircraft engendered a reliance on them over

[366]Scales, *Firepower in Limited War*, 19-20.

[367]Krepinevich, *The Army and Vietnam*, 164-165.

[368]Scales, *Firepower in Limited War*, 66-67.

human intelligence sources.[369] Reconnaissance that located the enemy needed firepower to deal with the enemies found, hence the need for attack helicopters.

The Vietnam War included the first purpose built attack helicopter, the AH-1 cobra. Attack missions were useful against both insurgents and regular forces, but their contribution to body counts only reinforced the attrition mindset. Analytical studies showed that more helicopters equaled more engagements and a lopsided quotient of enemies killed, which is the definition of success in an attrition strategy.[370] The weakness of the attrition strategy was that it did not isolate South Vietnam, control its population, nor legitimize its government. Conventional minded units supported by helicopters created pockets of tactical dominance, but this approach may have actually stymied operational and strategic political success.

The deployment and use of large airmobile units came at a cost to political efforts like advisors and Civil Operations and Revolutionary Development Support. With an institutional propensity to reward operational experience, the most qualified junior leaders chose assignments with units like the 1st Cavalry instead of advisor positions or jobs with Civil Operations and Revolutionary Development Support.[371] By not applying the best soldiers and leaders to programs that could increase the likelihood of political success, U.S. forces ensured lackluster political performance. Additionally, U.S. leaders like General Westmoreland told the American public that helicopter enabled attrition

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[369]McChristian, *Vietnam Studies*, 96.

[370]Tolson, *Vietnam Studies*, 171.

[371]Jenkins, *The Unchangeable War*, 7.

would win and when this strategy only achieved stalemate, many Americans withdrew their support for the war.

Considering the self-imposed political restrictions on allied conduct of the war, attrition was not a winning strategy. Attrition could not kill significant numbers of enemies quickly enough with ready replacements provided by North Vietnam. The Tet Offensive was an attrition victory against the VC, but PAVN infiltrators replaced most VC losses.[372] By not isolating South Vietnam, the war looked like a stalemate.

After years of the supposed attrition success, American perceptions of stalemate seemed unacceptable. Vietnam proved that helicopters could not isolate insurgents from outside support without ground troops. Without successful isolation, control of South Vietnam's population in was unlikely. Since South Vietnam's government could not secure its own population, it could not rule effectively.

The helicopters committed to Vietnam had effects similar to those used in Algeria. A string of tactical successes based on conventional warfare definitions of attrition convinced U.S. forces they could achieve strategic victory. If only they had more troops, more helicopters, and less restrictions, the allies could win in South Vietnam.[373] This approach ignored the requirement for balance between political and military goals to achieve strategic success in expeditionary COIN. By applying over 11,000 helicopters to South Vietnam, we traded our chance at strategic success for tenuous tactical dominance.

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[372]BACM Research, *Vietnam After Action Reports*, 194-195.

[373]Ibid., 2.

Soviet-Afghan War Lessons

The Soviet military created its helicopter and airmobile organizations to fight a conventional war against NATO in Europe. The Red army entered Afghanistan prepared to overwhelm its enemies with mechanized units. This approach quickly faltered and they came to rely on airmobile tactics. The air assault was the LCOSF's most important aviation mission. Soviet airmobile forces used air assaults to trap Mujahideen inside cordons or to insert ambush forces for supply caravan interdiction. The helicopter was one of the few Soviet platforms that consistently held tactical initiative against the enemy.[374] Of almost equal importance was the attack mission. Attack helicopters conducted fire missions to depopulate the countryside, lay mines, or conduct "free search and destroy" missions as a version of population control. These mission types underlined the incongruence between LCOSF tactics and strategy. LCOSF tactics were incongruent with strategic goals like DRA legitimacy. Additionally, the LCOSF version of population control via air power could not succeed without equal isolation efforts.

DRA legitimacy was a codified strategic goal, but the Soviet Army could not align their tactics and resources with this strategy. Soviet troop and helicopter limitations along with harsh tactics all but guaranteed that the disparate tribes of Afghanistan would not recognize DRA or Soviet authority as legitimate. LCOSF ground and airmobile forces achieved military stalemate against the Mujahideen, but stalemate could not challenge Mujahideen political control and legitimacy.

Just like previous case studies, the LCOSF applied elite paratroopers to serve as airmobile formations. Soviet helicopters and airmobile formations spent most of the war

[374]Scales, *Firepower in Limited War*, 175, 183.

flying around Afghanistan in search of military dominance, without much regard for political goals. Helicopters proved they were able to ensure tactical military dominance, if applied correctly. Drunk on the tactical success afforded by helicopter mobility and firepower, the Soviet Army killed and displaced their way to strategic failure in expeditionary COIN, alienating the Afghan people, the international community, and Soviet support along the way.

The Lie of Military Success in Expeditionary COIN

These case studies should serve as cautionary tales about what happens when conventional helicopter equipped forces engage irregular enemies in expeditionary COIN without a doctrinal framework or effective organizational adaptation. The helicopter was symptomatic of the problem, because its role was central to French, American, and Soviet tactical dominance. The problem with helicopters was in application. Helicopters were good at military dominance, but bad at supporting the political side of expeditionary COIN. Tactical dominance was easy to latch onto for conventional forces, but the effects of battlefield victory were indecisive in irregular warfare. Battlefield successes that did not result in greater legitimacy for the host nation government or greater support from the local people were not successes. Military success in expeditionary COIN lied because it reinforced the conventional mindset that focused on enemy casualties, and helicopters helped perpetuate the lie by finding, enveloping, and killing the enemy. For conventionally organized, trained, and equipped forces, it was difficult to see past the lie

The French, Americans, and Soviets all adapted, organized, and equipped their militaries for conventional airmobile warfare, which enabled perceptions of tactical dominance. By possessing helicopters, conventionally organized airmobile forces

naturally predisposed themselves to seek decisive victory under conventional terms. Unfortunately, conventional definitions did not apply to irregular warfare. In Algeria, South Vietnam, and Afghanistan, tactical and even operational dominance sought under conventional predispositions was contrapuntal to strategic success. It was too easy for conventional armies based on firepower and mobility to trap themselves into thinking that winning battles on their terms would win the war. The militaries involved ignored their past guerrilla warfare experiences, probably blinded by their shiny new helicopters.

The fact that the shiny helicopters contributed little to the success of political strategy went largely unrecognized. U.S. leaders including Admiral Grant Sharp and General Westmoreland continually ignored or only paid lip service to political objectives, applying helicopters and airpower as they had trained their entire careers to do, for mostly enemy focused purposes. Helicopters conducted token host nation political support in all three case studies, conducting missions including medical evacuation of civilians, resupply to civilians, and psychological operations. The main political contribution of rotary wing aircraft was to increase the political sustainability of expeditionary COIN by risk reduction.

Reduction of risk to friendly forces requires special mention because missions including medical evacuation, resupply, and search and rescue all decrease friendly casualties. Any reduction in friendly casualties positively affects the staying power of a hegemonic military in expeditionary COIN. Conversely, aviation missions flown in support of risk reduction will not defeat insurgents. Friendly forces must kill insurgents where necessary, but apply a balanced approach seeking both military and political objectives.

Tactical military successes in Algeria, South Vietnam, and Afghanistan were an inaccurate measure of progress toward strategic success. Airmobile battlefield successes may actually have set the conditions for strategic failure by balancing the focus of involved militaries away from politically oriented tactics, operations, and strategy. Conventionally equipped French, American, and Soviet helicopter forces could not resist the dominance of airmobile tactics, because none of them had a COIN doctrine that articulated the uses of helicopters in irregular warfare.[375]

Lack of Rotary Wing COIN Doctrine

The French, American, and Soviet militaries operated using helicopter employment doctrine created for conventional warfare. French paratroopers used helicopters as a more efficient extension of French airborne tactics. The U.S. and Soviet armies both created purpose built airmobile formations that were enemy focused. COIN operations occasionally require an enemy focus, but outcomes must mesh with political goals and depending on the state of a given insurrection, certain rotary wing assets may be left home. Doctrine should provide a framework with which to operate from, but the respective French, American, and Soviet helicopter employment doctrines were lacking with respect to COIN and irregular warfare.

Combat experiences in Algeria, Vietnam, and Afghanistan showed that conventional doctrine applied to irregular warfare produced sub-optimal results. U.S. doctrine during Vietnam prescribed how to employ helicopters in support of combat

[375]Trinquier, Occasional Paper #17, 9.

operations, but focused mostly on how to find and kill the enemy.[376] To the extent that aviation manuals mentioned irregular war, they only gave short sentences regarding the role helicopters should play in rear area security.[377] Soviet airmobile doctrine did not explain how to employ heli-borne forces against irregular enemies.[378] Rotary wing units need a solid doctrinal framework to set the training and organizational priorities required for adjustment in expeditionary COIN. Adjustment from conventional doctrine is required for optimal effectiveness in irregular warfare.

More robust rotary wing COIN doctrine could go a long way towards balancing military and political aspects of helicopter usage. Doctrine could help keep helicopters focused on reinforcing and risk reduction tasks instead of finding and killing. COIN Doctrine must counter-balance airmobile predispositions toward military goals because it is too easy for helicopter-equipped forces to dominate insurgents tactically according to conventional definitions, and then trap themselves into the mindset that tactical dominance will be decisive.

Concerning current doctrine, the Field Manual (FM) 3-24 is the current guidance, because aviation doctrine gives no special treatment to irregular warfare or COIN. FM 3-24 covers the uses of airpower in a five-page annex, in which helicopters are mentioned only briefly.[379] FM 3-24 states the following regarding helicopter employment:

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[376]U.S. Department of Defense, *Handbook for U.S. Forces in Vietnam*, 79-97.

[377]Headquarters, Department of the Army, Field Manual (FM) 1-110, *Armed Helicopter Employment* (Washington, DC: Government Printing Office, 1966), 26.

[378]Turbiville,"Soviet Airborne Operations in Theater War," 160-183.

[379]Headquarters, Department of the Army, Field Manual (FM) 3-24, *Counterinsurgency* (Washington, DC: Government Printing Office, 2006), E1-E2.

> Airpower will most often transport troops, equipment, and supplies and perform intelligence, surveillance, and reconnaissance missions. Rough terrain and poor transportation networks can create serious obstacles for COIN forces while giving advantages to insurgents. Airpower helps counterinsurgents overcome these obstacles.[380]
>
> If insurgents assemble a conventional force, air assets can respond quickly with precision fires. In a sudden crisis, air mobility can immediately move land forces where they are needed.[381]
>
> If insurgents assemble a conventional force, air assets can respond quickly with precision fires. In a sudden crisis, air mobility can immediately move land forces where they are needed.[382]

Clearly, the manual does not go far enough in describing how to apply helicopters in COIN. In addition, if aviators do not read COIN doctrine they will not fulfill their advisory role properly.

For Further Study: Revised Doctrine

The prominence of helicopters on today's battlefield means they should receive a more robust treatment concerning COIN rotary wing employment doctrine. This section will suggest a possible framework that prescribes helicopters by mission to irregular warfare using a tiered approach of support based on Mao's framework. Each tier would have specific mission sets and helicopters applied, which could provide a more reliable basis from which to balance the helicopters military and political contributions.

The three phases of Mao’s framework for revolution include the organization and preparation phase, the terrorism and guerilla warfare phase, and the conventional warfare

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[380]Ibid.

[381]Ibid.

[382]Ibid.

phase.[383] For example, phase three requires helicopter employment across the spectrum of aviation missions, which will appear similar in nature to conventional warfare at times. Phase three must still incorporate political considerations because the enemy might phase back to phase two if defeated at conventional war. Phase two support should apply mostly benign helicopter missions. Limited air assault missions, probably performed by special operations elements, should be the rule. Reconnaissance and security missions will be required in phase two, so gunships should be available, but limited. A heavy focus on risk reduction missions, support to host nation government, and political support should be the helicopter's most common mission types. Utility aircraft are predominant in this phase. Phase two leaders must be cognizant of political goals and how they mesh with military objectives, because coordination is key to success in expeditionary COIN. Phase one will likely only require utility aircraft and benign mission types. Friendly risk reduction and host nation support are the most important missions in this phase. A requirement for this tiered doctrinal approach is that specific and measurable criteria regarding which phase of irregular warfare exist so military forces could accurately categorize enemy actions to apply the appropriate response.

In conclusion, the U.S. Army's recent addition of stability as a primary task within the decisive action framework is a doctrinal shift that attempts to address a perceived change in the operational environment.[384] Specifically, the perception of change assumes that America's future will include a preponderance of stability

[383]Shrader, *The First Helicopter War*,146.

[384]Headquarters, Department of the Army, Army Doctrinal Reference Publication (ADRP) 3-0, *Unified Land Operations* (Washington, DC: Government Printing Office, 2012), 2-2 through 2-6.

operations fought in the realm of irregular warfare against insurgents as the primary enemy. The shift toward stability operations as a main focus for U.S. forces must include helicopters and their conceptual uses in irregular warfare to remain relevant.

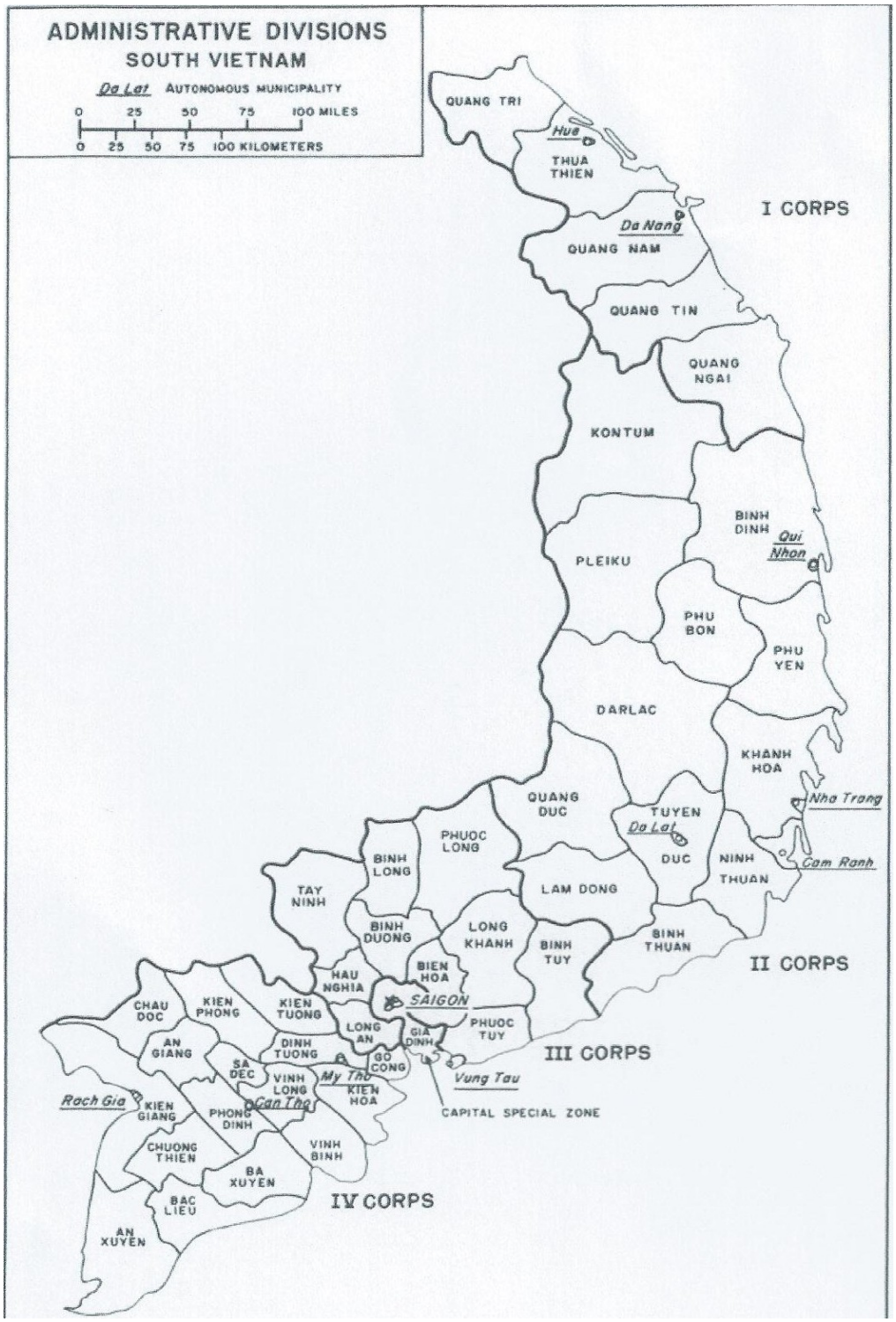
APPENDIX A

MAPS OF ALGERIA, SOUTH VIETNAM, AND AFGHANISTAN

Algeria

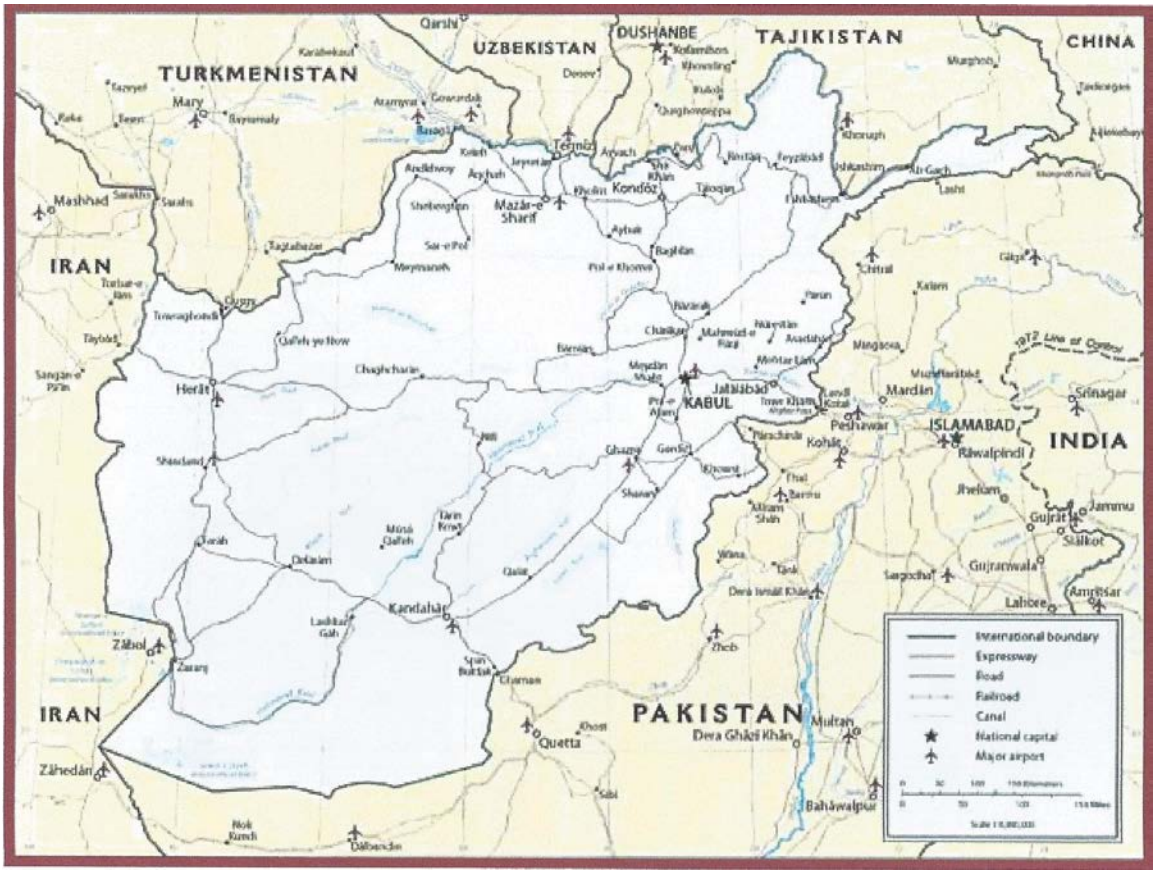
Source: R600 lesson 29 Algeria, PowerPoint presentation (accessed 10 May 2013).

South Vietnam



Source: John J. Tolson, *Vietnam Studies: Airmobility 1961-1971* (Washington, DC: Department of the Army, 1999), 60.

Afghanistan



Source: Joseph J. Collins, *Understanding War in Afghanistan* (Washington, DC: National Defense University Press, 2011).

APPENDIX B

THE HELICOPTERS

Scout/Reconnaissance Helicopters

OH-13 Sioux

Source: militaryimages.net (accessed 17 May 2013).

Alouette II

Source: militaryimages.net (accessed 17 May 2013).

OH-6 Cayuse (LOACH)

Source: militaryimages.net (accessed 17 May 2013).

OH-58 Kiowa

Source: militaryphotos.net (accessed 17 May 2013).

Attack Helicopters

AH-1 Cobra

Source: militaryimages.net (accessed 17 May 2013).

Mi-24 Hind

Source: militaryimages.net (accessed 17 May 2013).

Utility/Assault/Cargo Helicopters

UH-19 Chickasaw

Source: militaryimages.net (accessed 17 May 2013).

CH-21 Shawnee (Flying Banana)

Source: militaryimages.net (accessed 17 May 2013)

UH-34 Choctaw

Source: militaryimages.net (accessed 17 May 2013).

CH-37 Mojave

Source: militaryimages.net (accessed 17 May 2013).

UH-1 Iroquois (Huey)

Source: militaryimages.net (accessed 17 May 2013).

HH-3 Sea Knight

Source: militaryimages.net (accessed 17 May 2013).

CH-47 Chinook

Source: militaryimages.net (accessed 17 May 2013).

CH-54 Tarhe (Flying Crane)

Source: militaryimages.net (accessed 17 May 2013).

HH-53 Jolly Green Giant

Source: militaryimages.net (accessed 17 May 2013).

HH-43 Huskie

Source: www.aviastar.org (accessed 1 June 2013).

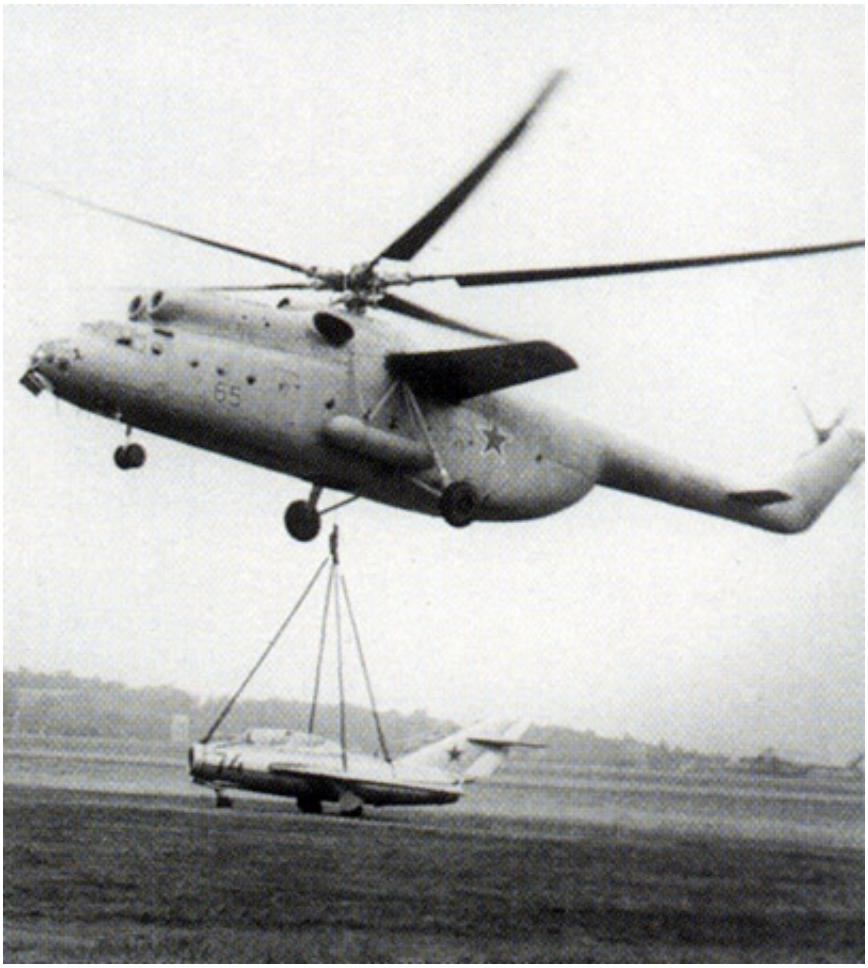
Mi-4 Hound

Source: globalsecurity.org (accessed 17 May 2013).

Mi-8 Hip/Mi-9 VZPU

Source: militaryimages.net (accessed 17 May 2013).

Mi-6 Hook

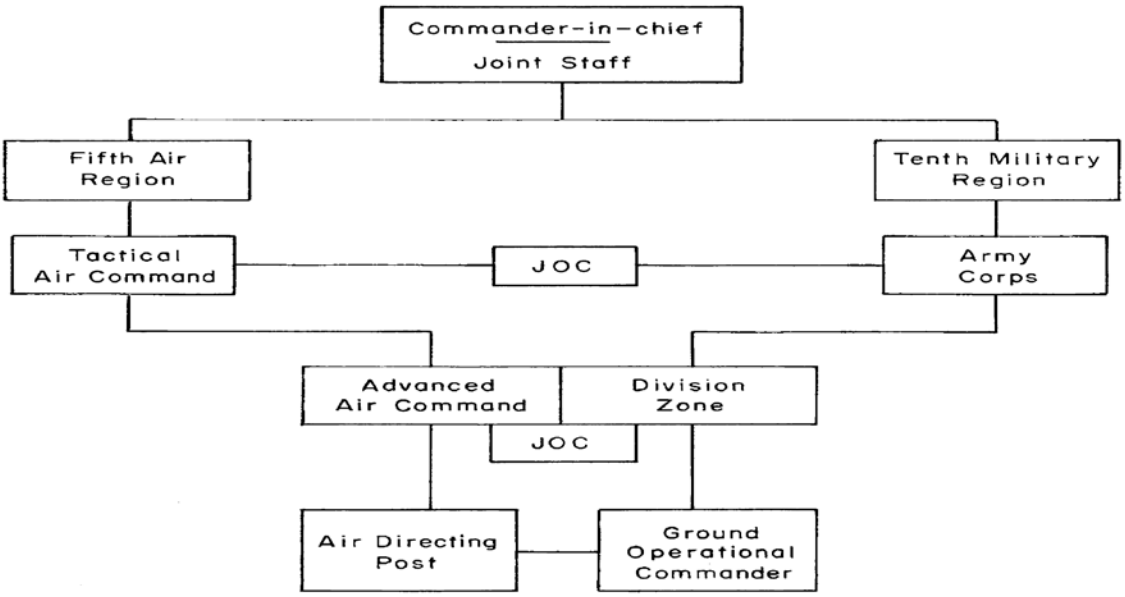


Source: fsaircraft.net/mil/mi_6 (accessed 17 May 2013).

APPENDIX C

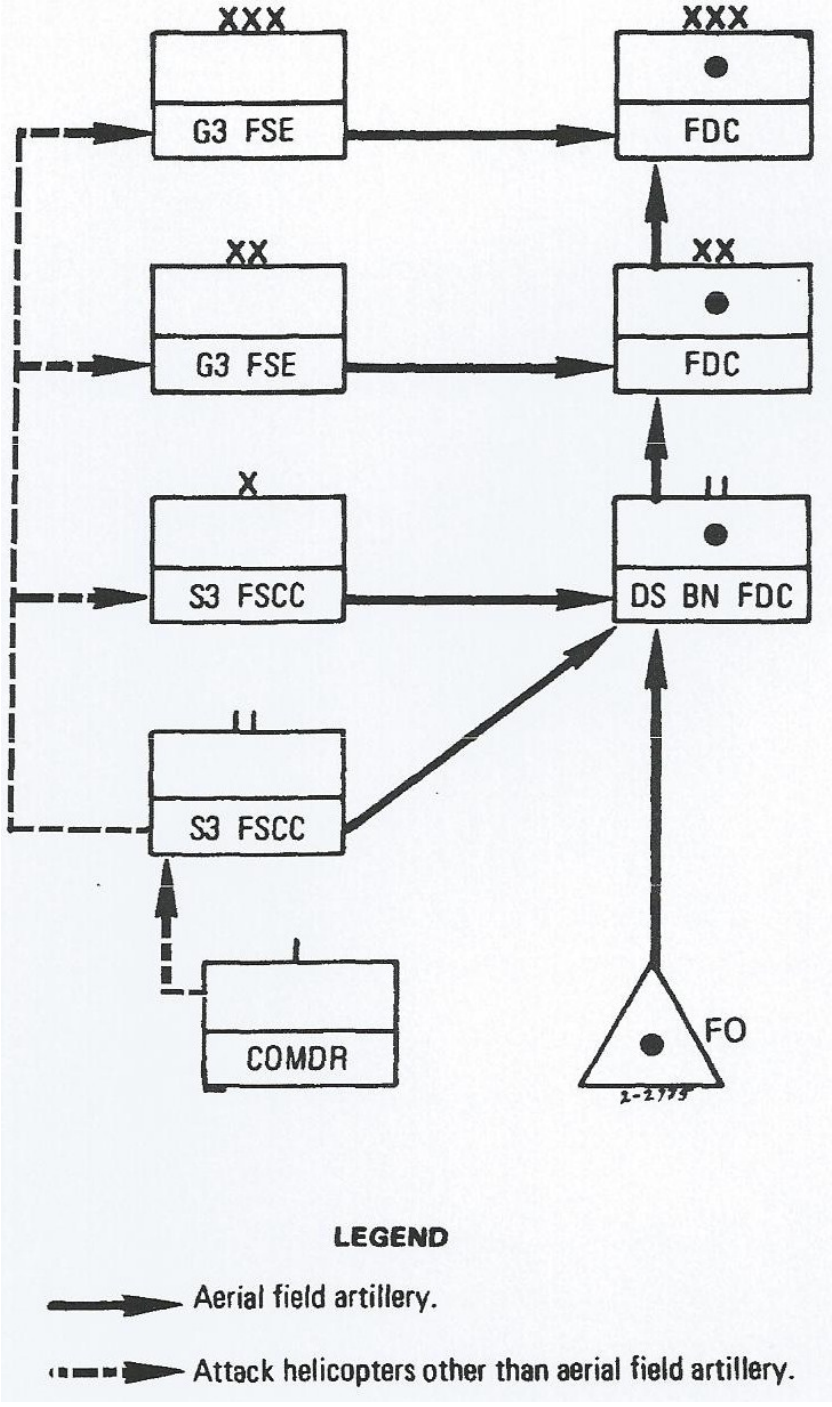
C2 STRUCTURAL DIAGRAMS

Algerian Aviation C2 Structure



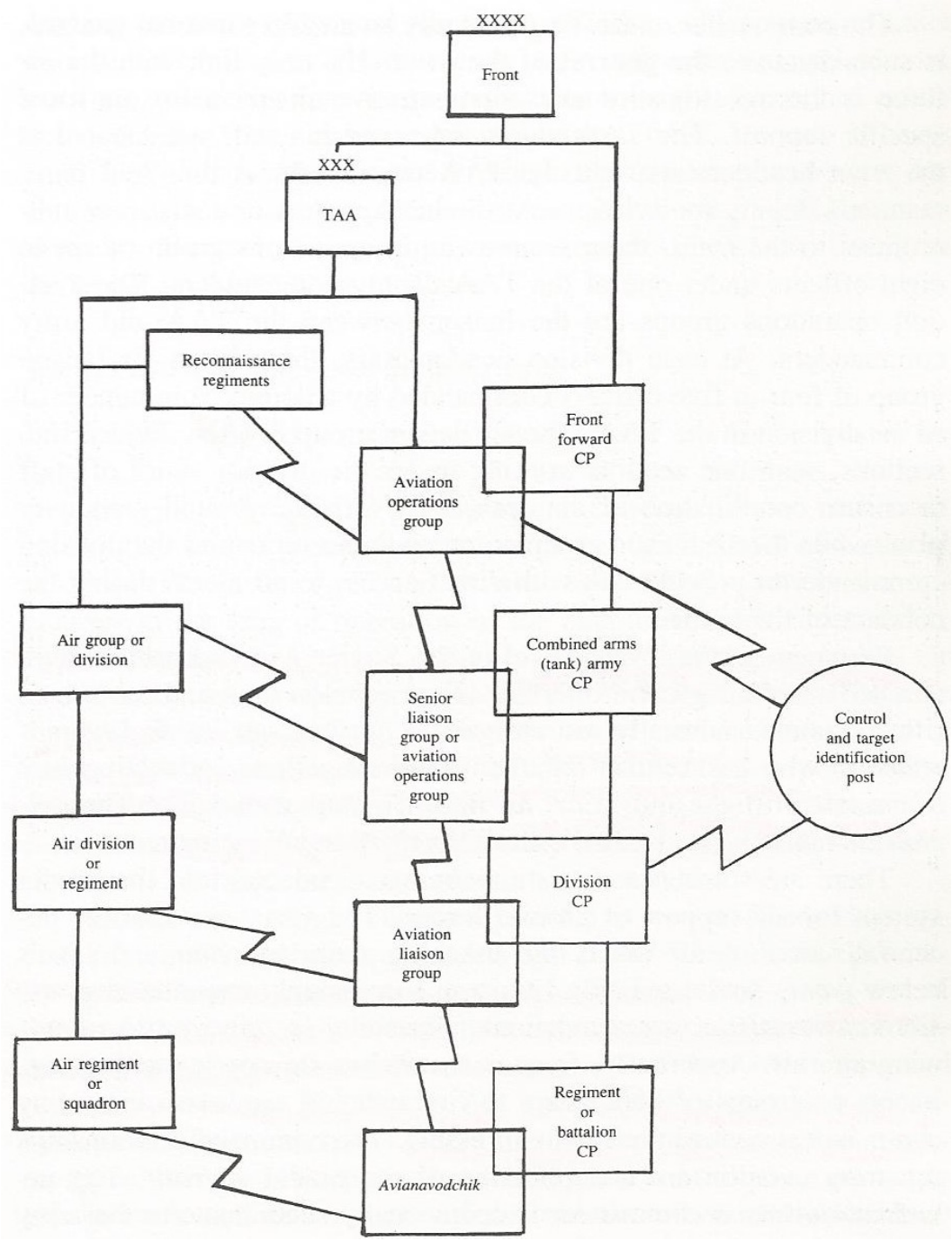
Source: A. H. Peterson, G. C. Reinhardt, and E. E. Conger, ed., Memorandum RM-3653-PR, *Symposium on the Role of Airpower in Counterinsurgency and Unconventional Warfare: The Algerian War* (Santa Monica, CA. 1963), 19.

United States Army Aviation Support System (attack aviation request) Vietnam



Source: Headquarters, Department of the Army, Field Manual (FM) 100-26, *The Air-Ground Operations System* (Washington, DC: Government Printing Office, 1973), 6-3.

Afghanistan Air-Ground Control and Coordination Within the Soviet Front



Source: William P Baxter, *The Soviet Way of Warfare* (Presidio, CA: Presidio Press, 1986), 193.

APPENDIX D

INTERVIEWEE BIOGRAPHICAL DATA

Brigadier General Stanley F. Cherrie (Ret.)

Brigadier General Stanley F. Cherrie, U.S. Army (ret.), served a 12-month tour in Vietnam as a pilot and leader in the armed platoon of the 191st Assault Helicopter Company, 214th Combat Aviation Battalion. The 214th supported the 9th Infantry Division in the Mekong Delta. General Cherry started as a Pilot-in-Command and Light Fire Team (LFT) commander (2xUH-1C gunships). After a week in the company, he was promoted to section leader (2xLFTs). He received his final promotion with the 191st during the Tet Offensive, when he served as platoon leader from 5 February 1968 through 18 May 1968. During a year in Vietnam, General Cherrie flew 1485 hours in his primary aircraft the UH-1C Gunship. His primary missions included air assault security and attack/gunship support.

Following Vietnam, General Cherrie served in Operation Desert Storm as the G-3 of VII Corp. From 1993 to 1995, he was Assistant Division Commander for Maneuver of the 1st Armored Division in Germany and Bosnia. His military decorations include the Distinguished Service Medal, the Silver Star, the Distinguished Flying Cross and the Purple Heart.

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